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THE DAILY MEALS OF SCHOOL CHILDREN

By CAROLINE L. HUNT

DEPARTMENT OF THE INTERIOR

WASHINGTON
GOVERNMENT PRINTING OFFICE
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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, March 9, 1909.

Sir: I beg to transmit herewith a monograph on "The Daily Meals of School Children," and to recommend its publication as one number of the Bulletin of the Bureau of Education for the current year.

Miss Caroline L. Hunt, the author of this monograph, was for four years professor of home economics in the University of Wisconsin, and at an earlier time was head of the department of domestic economy in the Lewis Institute at Chicago and director of the Lewis Institute lunch room. While the author is responsible for her discussion of the problem under consideration, the work as a whole has been undertaken at my special request. It has seemed to me that a wider knowledge of numerous facts relative to wholesome meals for school children and the wholesome serving of such meals could be made to help materially in the promotion of the physical health of these children and in the promotion also of their mental health and vigor. This conviction has been deepened by consultation with the representatives of several of the more important voluntary organizations in this country which concern themselves with matters affecting the welfare of children.

This monograph is not to be regarded as a special plea for the feeding of school children at public expense nor for any other special project or reform. It may be expected to contribute to an intelligent discussion of such plans, and it is to be hoped that it will further any good measures which may be projected for dealing in an educational as well as an eleemosynary way with such actual need as may be brought to light among the children in our public schools. On the other hand there are undoubtedly many children coming to school from well-to-do homes who suffer from unwise practices touching their daily food. It is believed that the suggestions offered in this publication will be welcomed in many such homes, and if applied with common sense, will work to the advantage of the children who are daily sent from those homes to public or private schools.

Miss Hunt's emphasis upon the social and educational side of the luncheons taken by children in the course of the school day and under the oversight of school teachers will also be found extremely pertinent and suggestive.

Very respectfully,

ELMER ELLSWORTH BROWN,
Commissioner.

The SECRETARY OF THE INTERIOR.

THE DAILY MEALS OF SCHOOL CHILDREN.

I. INTRODUCTION.

The subject of the proper feeding of children of school age involves problems which may be said to be the most difficult as well as the most important of all the problems of human nutrition. The child of school age must grow and must also work. In this he differs on the one hand from the infant, whose work is all ahead of him, and on the other hand from the adult, whose period of development is past. The work which is expected of him is, to be sure, not large in amount, but it must be done at certain prescribed times, and it takes the form of the utilization of opportunities and privileges which have been provided for him at great public expense. It is costly to educate a child, and the cost may become waste if educational advantages are offered to those who are dull because of improper feeding, or who are underfed and ill nourished.

The child's school work, however, represents only part of his total activity; there are other forms of activity for which provision must be made in his diet. Of these an important one is play, which is being recognized more and more by educators to be a large factor in normal development. There is a direct connection between the muscular activity involved in play and the satisfactory performance by food materials of their function in the building of bones and muscles. To supply abundant energy for play is therefore one of the important purposes of the proper feeding of the child.

We may therefore say that there are three distinct points to be kept in mind: First, the necessary supply of energy for bodily growth; second, the necessary supply of energy for play; third, the necessary clearness of the brain for study.

Another element in the problem is the absence of any fixed standard, either for the amount of food needed by a child of given age, or for the relative proportion of the various so-called food principles in the diet. This makes the problem more difficult than that of the artificial feeding of infants, for which the composition of human milk offers an exact model.

In view of these facts it is to be regretted that the literature of dietetics offers less that is helpful on the subject of the feeding of school children than upon the feeding of infants or of grown people.

Of late this important subject is being brought to our attention in new forms. Reports that many children, particularly in large cities, are coming to school hungry, or are so underfed as to be unable to take advantage of the instruction offered to them, have raised the question whether free meals for school children may not be a necessary means of securing that equality of opportunity for which our public school system stands. "After bread, education," is the cry of those who are urging the feeding of school children at public expense.

Again, the growing emphasis which is being placed upon the value of the informal education of the schools—that which is given silently by the surroundings of the child and which is efficacious in the formation of cleanly and healthful habits and of good taste—makes it seem desirable that any food which the child takes in the school building, even if it is taken from a lunch box, should be so served as to contribute to his training. We are beginning, in fact, to see cultural possibilities in the noontime intermission which up to a short time ago were unrecognized even in educational circles.

Thus the proper feeding of school children involves not only questions of hygiene but of educational policy and social economy, questions which are only beginning to receive serious consideration.

II. THE SERVING OF FOOD IN SCHOOLS.

While the reports which have been recently circulated about suffering among school children have had the desirable effect of arousing interest in the general subject of the feeding of such children, they have had also the undesirable effect of complicating the situation by introducing considerations not purely educational.

No one denies that vast numbers of school children are habitually undernourished and that many really suffer from hunger. Nor are there many now who believe that children should be allowed to suffer in any way or be handicapped in their development and education because of the misfortunes, misdeeds, or shortcomings of their parents. Since, however, for every hungry child of school age there is probably one at least too young to be in school and many suffering adults, the problem of the underfed school child can not be considered as a thing by itself; it must be regarded as part of a larger problem, social rather than educational in its character. To feed the child in school is to reach part of the difficulty only, and to reach even that part in the most superficial manner.

The question of feeding school children in general may, however, properly be regarded as an educational one, if it can be shown that the ordinary education of the schools can be made of greater value to the pupils if food is served by the school authorities, or if it can be shown that there are certain facts about food and certain habits of eating which should be given as part of public education, and which can be given to young children best by the laboratory method, i. e., by actually serving food in the schools.

THE PRACTICE IN GOOD SCHOOLS.

Considering the way in which this subject has been complicated by hard times and lack of employment among parents, it seems wise to look to the habitual practice of wise educators in the matter of the feeding of school children, rather than to emergency feeding made necessary by unusual circumstances. We should expect the best answer to the question whether children can be educated in important matters relating to diet and table habits and whether it is desirable to serve food during the session, to be given by schools which are close to the sources of educational ideals and which are comparatively free to put ideals into practice. In our public schools it is seldom possible for the educators in charge to carry out their highest ideals, because of the constant handicap imposed by lack of funds. Their standards are therefore likely to be underestimated. In the practice schools connected with well-endowed colleges, on the other hand, and in many private schools, an idealist has a great advantage over most masters, principals, or superintendents in the large amount of freedom given him to work out his ideals. His position as head of a model school assures this. An instance or two, therefore, drawn from schools which are striving to be models may be helpful.

The Speyer School.—In the Speyer School, a primary school of New York City set aside as a practice school for Teachers College, every child from the kindergarten to the third grade is given a cup of milk and a Graham cracker at half past 10 o'clock. The children first rest for a few minutes with their heads down on their desks. A paper napkin is then placed on each desk and the milk and crackers are passed. Another napkin is given for use by the child. If the child is able, he pays 35 cents a month for this food, but if unable he is fed with the others and the knowledge of his poverty is not allowed to reach the other children. The principal of the school reports that, as the year advances, there is always a marked improvement in the condition of the children, probably due to the fact that the food which they take between meals is of wholesome character and is taken with regularity. She reports also a great improvement in table manners. Children who begin by scattering crumbs quite recklessly end by eating in very orderly fashion.

The Hebrew Technical School for Girls.—In the Hebrew Technical School for Girls in New York City every girl is given a cup of milk or cocoa in the middle of the morning. At noon soup is sold by the school for 1 cent a bowl. Here also a marked improvement in physical condition is noted as the school year advances. It would be difficult, however, to say how much is due to the feeding, and how much to the absolutely perfect ventilation and cleanliness of the building and the careful attention to physical training.

These schools are not given as exceptions, but as examples to show that where ideals prevail it has been found helpful to give food to young pupils during the school sessions, even when there is no reason to suppose they are suffering from underfeeding.

EXPERIENCE AMONG BACKWARD CHILDREN.

At the other end of the scale, where education is being carried on at the greatest disadvantage, we find that plans for feeding children in the schools have almost always originated with those who are in charge of backward students. Miss Farrell, now in charge of the ungraded schools of New York City, reports an interesting experiment made by her when teacher of the special class, public school No. 1, New York.[a] It was discovered that the boys in this class were usually locked out of home during the day because their mothers were at work. They were given a few pennies to buy food. These pennies had usually been spent for such things as ice-cream-sandwiches and ginger beer. Miss Farrell began to serve milk at 1 cent a cup and to encourage the boys to bring a bread and butter sandwich from home. Later the food which was prepared in the cooking classes was served to these boys. The girls in the class not only prepared food, but also set the table. The cost of the domestic science work was not increased and the lessons became "more real" because of their usefulness.

"Of the class of twelve boys who sat down to the first school luncheon," Miss Farrell says, "only one had sat at a table with his family, and that one had brought the way of it from a convalescent home in New Jersey where he had been a resident for a year." Sidney Webb, in a recent address before the Social and Political Education League in London,[b] points out that legislation which assures certain general rights and privileges to all the people must be followed by special legislation in the interest of certain classes. He asserts that class legislation is wholly democratic, illustrating his point by saying that the provision for general education for all should be followed by provision for special education in cases of special need. It would look as if the case cited by Miss Farrell were one in which "equality of opportunity," and the chance to learn at some time during childhood the amenities of life, would have to be secured by special concession. If the habit of sitting down to a table decently and in order is as valuable as we are inclined to consider it, it would seem as if every child ought to have a chance to taste of its advantages and to decide for himself whether it is a custom he wishes to continue in later life or not. In this case a special need which is purely educational was revealed by the effort to correct a condition for which the schools themselves could be considered in no way responsible.

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[a] "School luncheons in the special classes of the public schools," by Elizabeth Farrell. In Charities, *March 11, 1905.*

[b] *"The necessary basis of society,"* by Sidney Webb. In Contemporary Review, June, 1908.

THE STANDARDS SET BY RELIEF MEASURES NOT MODELS FOR EDUCATORS.

In the National Review for December, 1904, there appeared a most suggestive article on "Free meals for school children," by George Hookham. Mr. Hookham was the man who bore the entire expense of serving free breakfasts to the children of Birmingham up to the time of the passage of the provision of meals bill by the British Parliament, as appears from the report of the select committee to which the bill had been referred. By the terms of this bill, municipalities were authorized to cooperate with voluntary organizations in serving meals to school children. In the article referred to Mr. Hookham shows that they succeeded in Birmingham in so simplifying all the processes of serving the food that 84 per cent of the cost of the meals went for the food materials themselves. This from the standpoint of relief was a triumph; from the standpoint of education it can not be taken as a model. The mere relief of gnawing hunger is obviously the work of other agencies than the school authorities. Unless money enough can be put into the experiment to make the serving of the food a means of education, the entire work would seem to fall more properly to charitable organizations or poor relief boards.

THE MODEL SCHOOL LUNCH AN EFFECTIVE MEANS OF DISTRIBUTING RELIEF.

In this connection, however, it should be noted that a school lunch so conducted that children themselves pay for the food while the school board pays for the educational part, for all that is necessary for training and for that silent education which is given by tasteful surroundings, may be the most effective means of distributing relief in case of necessity. According to the act recently passed by the British Parliament, school boards may appropriate funds for the buildings and equipment necessary for feeding children and may cooperate with voluntary organizations in serving the food. It is expected that the children will pay the cost of the materials and running expenses. There is, however, a provision that a small amount may be taken from the rates to pay for the food of any necessitous children whose expenses can not be met by the voluntary organizations. Under such an arrangement the meals and the method of serving them could be kept up to educational standards, and at the same time the furnishing of food in this way would be a convenient and economical means of giving relief in exceptional cases.

It is said that in France, where a system of serving meals to school children has been most carefully worked out, the effect is to simplify the work of relief, for no parent is able to use his starving child as an argument in applying for assistance.

THE AMERICAN ATTITUDE TOWARD FOOD.

It may be that the fact that we have been slow to see the educational possibilities in school meals, and have questioned the wisdom of meeting any part of the expense from the public treasury, indicates that we ourselves have had incorrect ideas about food. If food were looked upon as vitally connected with health and efficiency, instead of as a means of gratifying the palate, we should probably think more about the desirability of imparting mental and physical vigor to the next generation and much less about the possibility of pauperizing fathers and mothers by the process. We should probably value much more highly than we do the opportunities which the schools offer for teaching children the facts about the nutritive value of different foods and for training them in table manners. This is not intended in any way as an argument for indiscriminate free feeding, but rather for the need of a different attitude of mind toward food itself in order that its relation to education may become more clearly defined.

THE FACTOR OF SOCIABILITY OR GOOD FELLOWSHIP.

Where the object of school meals is simply to transfer a certain amount of food from a common supply to a hungry child, as it is where the standard is set by the needs of the suffering poor, there is no opportunity for that good fellowship or sociability which is recognized as a means of education. In the Ethical Culture School of New York the children, enough to fill the lunch room, sit down at one time and the opportunity for social intercourse thus afforded is considered a valuable part of the training of the school.

Those who believe that the duties of citizenship are as important as those of family life, and that the ability to dwell harmoniously in communities and to work for the common good is an important end in education, value the training that is given during the one meal at which all the children of a neighborhood sit down together, and at which there is an opportunity to add to the spirit of fellowship developed in the home, the spirit of a larger fellowship with all those of the community.

THE IDEAL SCHOOL MEAL.

The ideal school meal would, of course, both in its food content and in the manner of serving, be somewhere between the ordinary *meal of the poor* and the meal of those who are free to yield themselves to luxury. The effort to devise such a meal involves a careful examination of all our practices, to see which of them have a reasonable foundation and which involve an unpardonable waste of human resources and energy. There could be no better test of the expediency of a given form of living than its fitness to be made a subject of public instruction. We are likely to think of public-school meals as a means of instructing the children of the poor in table manners; they might, however, be quite as valuable in accustoming the children of the rich to rational simplicity.

PUSH CARTS AND SMALL SHOPS A MENACE.

Another factor which must always be taken into consideration is the fact that most children are given pennies to spend, and that there are always people anxious to secure these pennies by starting small shops in the neighborhood of school buildings or bringing thither push carts at recess. Food obtained from these sources is seldom either wholesome or safe. This presents a constant problem which affects all the children, and from the educator's point of view is more pertinent than the problem of the relief of a few children.

I once took the number of the license of a cart from which I had seen scores of children eating. I went to the city hall and got the name and address of the owner. In the evening after working hours I saw the cart with its cans of crackers and cakes stored in an unspeakably filthy cellar in a filthy and crowded tenement house.

In the first report of the tenement house department, New York City, there is a description of a tenement house cellar in which a push cart was kept. The waste pipes had broken, the cellar was flooded with filth, and on the top floated decayed fruit.

The principal of the Friends' School, in Washington, had trouble with push-cart men. One day a pupil whose father is manager of a large hotel said in a speech before the school that a push-cart man had offered to buy all the ice cream left on the plates in his father's hotel. This statement put an end to the push-cart trouble in that school.

THE BEGINNING OF THE SCHOOL LUNCH-ROOM MOVEMENT IN AMERICA.

It was the recognition of the dangers lurking in the food sold to school children, and also the realization of the vast educational opportunities that were being thrown away, that led Mrs. Ellen H. Richards in 1894 to begin her very valuable work of serving simple luncheons to the students of the high schools of Boston. The food was originally prepared under Mrs. Richards's supervision in the famous New England kitchen of Boston. The work has now grown to such proportions that it has been absorbed by the Woman's Educational and Industrial Union. There can be no doubt that Mrs. Richards's work, which was the result of a thorough understanding of the needs of all young people, the well-to-do as well as the poor, was the inspiration of most of the valuable work in this line that has been done in this country.

COOPERATION BETWEEN SCHOOL AUTHORITIES AND VOLUNTARY ORGANIZATIONS.

Since the question of food for school children is so important educationally and at the same time is not a purely educational matter, it offers a favorable occasion for cooperation between school authorities and organizations formed for the purpose of improving social conditions. That many people are recognizing the opportunity for cooperation is shown by the fact that in Boston the lunch rooms in the high schools are controlled by the school board and the Woman's Educational and Industrial Union. The school board provides the room and the equipment and a certain amount of the care, while the union prepares and serves the food. The union is pledged to provide the food at cost and it works in connection with a committee of head masters.

In the Lake View High School, of Chicago, there is one of the best examples of successful cooperation, the associated club being the Ravenswood Woman's Club. The school authorities have given a large, light, beautiful room on the top floor of the building. Here the patrons wait on themselves but have an opportunity to sit at tables and to eat in comfort. The club selects a manager and also a treasurer. It determines what shall be served and keeps close supervision of the plan. It makes no money. When there is a surplus it is disposed of by reducing the price of milk or of some other nourishing food. Lunch rooms in other Chicago high schools are conducted by women's clubs. In some of these the enterprise is undertaken for money-making purposes.

THE CULTURAL POSSIBILITIES OF THE NOON HOUR IN RURAL SCHOOLS.

Investigation has revealed no case in which a woman's club has embraced what would seem to be the best of opportunities, the chance to take charge of the noon hour in a consolidated rural school. Mrs. Richards, in her little pamphlet called "Good Luncheons for Rural Schools Without a Kitchen,"[a] has made many valuable suggestions for such an undertaking. She gives the following description of an experiment which in private conversation she accredits to the enterprise and enthusiasm of a country school-teacher in Maine:

---

[a] Good Luncheons for Rural Schools Without a Kitchen, by Ellen H. Richards. Boston, Whitcomb & Barrows, 1908.

From "The true history of one country cooking school," as related by the teacher, the following extract is made:

"The school committee and the teacher discussed the possibility of preparing warm lunches, the children doing the actual work, the teacher serving as buyer and steward. There are three objects in this—the health of the children, their instruction in cooking, and also such instruction in table manners as might be given without hurting their pride or feelings.

"The teacher estimated that a bill of fare for one warm dish each noon could be provided at a cost of 2 cents a child, each bringing in addition bread and butter. Arrangements were to be made that children who had not the pennies could pay for their dinners by doing some work for the teacher—the other pupils knowing nothing of this arrangement.

"Ready money is scarce with farmers, even as little as 2 cents a day for a goodly family; but milk and vegetables are plenty, and farmers are generous according to their means, and they often sent offerings, which made the expense less for the experiment. * * *

"Each child brought two napkins, a knife, fork, spoon, plate, cup, and saucer. This was the introduction of some of them to napkins. Two napkins were needed, because each child had to use his desk as a table, and tables must have tablecloths.

"The equipments were given by various persons. The committeeman sent a kerosene stove with oven, which would not bake at all unless placed over one of the stoves that served to heat the room. * * * The other articles of household utility were half a dozen dish wipers, two dishcloths, mixing pan, dish pan, spider, frying pan, large kettle, big spoon, boxes for salt, pepper, flour, and some groceries that were kept on hand. The boys made a convenient cupboard for these and another for the dishes, and doors on them kept out the dust. * * *

"It took some planning to arrange the work so that lessons should not suffer nor be interfered with by the necessity for the cook's presence at the stove, but certain regulations soon worked themselves out. Unless a girl had her lessons she could not serve as cook, and there were others always glad to serve in her stead. * * * The cooking force consisted of one big girl, who ought to know something, and three helpers. This force was changed each week. The week's bill of fare was given to the big girl, whose duty it was to see that everything was prepared before 10 minutes of 9; that the room was neat; that the food was put on the stove at a proper hour, served properly, the dishes washed, and all tidied again. No vegetables were peeled during school hours, nor other work of that order allowed to come in study hours. * * *

"The cooking done by these children between 8 and 14 years was a revelation to the teacher, who had seen some of that done by their elders.

"To the objection that air in a schoolroom is bad, and food cooked therein must be unappetizing, there is only one reply—a country school can have all the fresh air needed—and this school did. * * *

"A small expenditure of money will fit any school for the cooking lessons which are practical for that school. Interest and zeal on the part of teacher and pupils will make the work successful under difficulties, and often children learn more when things are not made too easy for them. Economy in use of time and materials, neatness, attention to one's work regardless of that of others, are good lessons to learn, and they will all come to the country school where cooking is taught, even without a modern improvement."

Mrs. Richards herself adds:

> The overworked teacher can not be expected to give thought and time to such oversight in her short rest hour, and the taxpayers will not at first see the advantage to their pockets in providing extra help; but the field is open to the woman's club of the town, and offers to them an example of cooperation, a subject of study in perfecting details of management which they will be able to cope with as circumstances demand. No more interesting work and surely no more profitable occupation could be found for the talent now lying idle or wastefully used in every town in the land.

An experiment in Methuen, Mass.—An interesting experiment made in Methuen, Mass., is described in the following extract from a letter written by the superintendent of schools, Mr. Charles A. Breck:

> The experiment was an attempt to utilize the lunch hour as a means of culture. I talked the matter over with the rural teachers, and offered to purchase equipment. Several of them asked for oil stoves, dish pans, kettles, etc. In place of lunches of slabs of bread, eaten from a paper bag in solitude, the attempt was made to make the lunch a means of social training, by sitting at table, with paper napkins and lunch attractively arranged, with some dishes cooked at school. The improvement in table manners was rapid, as well as in the quality of the lunch. One teacher reported an improvement in quality and neatness of clothing. Part of the lunch hour was spent in making the room and grounds more attractive.

This work has been temporarily abandoned because of a change of teachers.

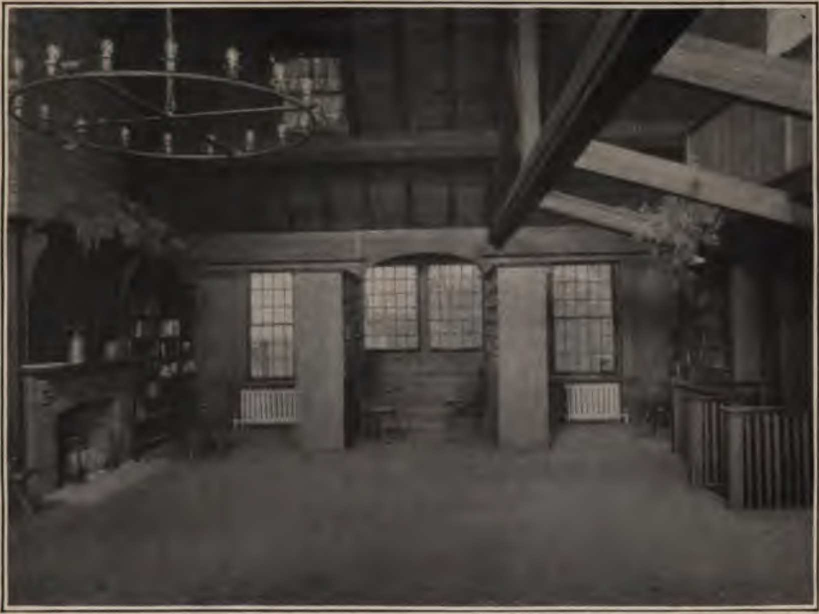
THE NEED OF SPACE FOR LUNCH ROOMS.

In the matter of the use of room there is a temptation to insist that luncheon be served in the room where instruction has been carried on, because this seems to bring the plan within the reach of the average rural school. It should not, however, be forgotten that the average rural-school building is far from ideal, and that with the increase of sentiment in favor of consolidated schools there will doubtless be many new buildings erected in the near future. It is easy to reserve space when the building is being planned and very difficult to find such space later unless it has been set aside for the purpose.

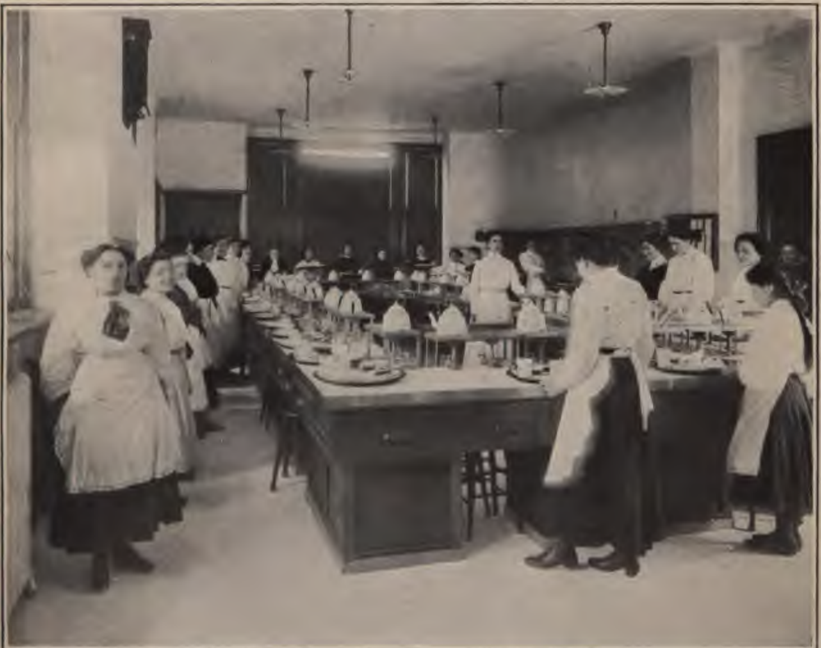
It is interesting in this connection to find that one of the nine recommendations made in the report of the select committee on the British provision of meals bill relates to this very matter. It reads:

> The evidence, verbal and documentary, placed before the committee has led them to arrive at the following general conclusions:
>
> * * * (8) That it is undesirable that meals should be served in rooms habitually used for teaching purposes, and that the regulations of the Board of Education should carry this recommendation into effect.

Advantages of attic over basement rooms.—It is to be hoped that the advantages in healthfulness, cheerfulness, and artistic possibilities of attic rooms over basement rooms will not be overlooked by school authorities. The supports of a roof are capable of most artistic treatment, while overhead steam and water pipes have as yet defied all



A. THE TOWN ROOM, BOSTON, ILLUSTRATING THE POSSIBILITIES IN ATTIC ROOMS.



B. MODEL KITCHEN IN HEBREW TECHNICAL SCHOOL FOR GIRLS, NEW YORK CITY. CLASS IS ABOUT TO SERVE LUNCHEON TO TEACHERS AT NOON.

these tables, two paper napkins being given to each girl. It is not ideal, of course, for the girls to eat in the same room in which they have been working, but limited quarters make this necessary at present.

Supplementary dishes served at 3⅓ cents—prepared by trade school girls, Boston.

Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Scalloped rice and tomato.	Tapioca cream	Creamed codfish on toast.	Baked stuffed tomatoes.	Cocoa and Dutch biscuit.
Scalloped corn	Garfield pudding with custard.	Potato soup or dried green-pea soup with croûtons.	Meat pie	Apple shortcake.
Cocoa and hot water; gingerbread.	Boiled cod and egg sauce.	Boiled rice and chocolate sauce.	Mashed potato with creamed dried beef.	Corn chowder.
Apple shortcake	Meat pie	Egg à la goldenrod.	Chocolate bread pudding.	Scalloped macaroni with tomato.
Corn soup and crisp crackers.	Cocoa and Dutch biscuit.	Baked rice pudding, or baked beans and brown bread.	Celery soup and croûtons.	Salmon, box, with white sauce.
Mashed potato and creamed dried beef.	Scalloped macaroni with cheese.	Apple tapioca with custard.	Cottage pudding with chocolate sauce.	Boiled cod with egg sauce.
Cream of tomato soup; croûtons.	Cottage pudding with chocolate sauce.	Beef stew; cocoa	Scalloped fish	Split pea soup; croûtons.

Normal school, Honolulu.—An interesting description of a similar plan being carried out in the normal school in Honolulu is given in the Boston Cooking School Magazine for 1907–8, page 292.[a] The department of cooking in this school has been put upon a paying basis. A bowl of soup and three or four sandwiches are sold for 5 cents. A more elaborate meal is prepared to sell to older pupils and teachers. An interesting feature of this work is the kitchen garden, which is the charge of the boys. This, as well as the cooking department, is self-supporting.

The Hebrew Technical School for Girls, New York.—In the Hebrew Technical School of New York the domestic science classes cook lunches for the teachers of the school and take them on trays to the different class rooms. The plan in this school is somewhat unique, the pupils getting practical experience in cooking and serving, though not in connection with their own luncheons. Those who bring their lunches from home eat in the class rooms with the teachers and have an opportunity to buy soup at 1 cent a bowl. (See page 9.)

The High School of Practical Arts, Boston.—In the High School of Practical Arts in Boston the cooking classes prepare a number of dishes each day for sale to the students of the school at noon. The plan seeks to give the pupils experience in the handling of money and buying, as well as in cooking and serving. The students learn to put their own prices upon the food sold.

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[a] "How a 5-cent lunch is cooked and served at the Honolulu normal school," by Marion Bell. In Boston Cooking School Magazine, January, 1908.

Suggestions for rural schools.—The general plan adopted in the schools mentioned above, by which the work in domestic science is made the means of providing supplementary dishes for the school luncheon, is better fitted to the needs and opportunities of rural schools than the more formal training which can be given only with a separate outfit of utensils for each pupil. A very simple equipment will answer all the necessary purposes of cooking and serving.

The principles of table setting, for example, can be taught with simple furnishing as well as with elaborate. The setting of a table successfully is like the designing of a pattern by the repetition of a single motive. In the pattern the motive may be a rose. This must be so modified or conventionalized as to make a pleasing figure on a flat surface; it must also be so modified that the spaces between the figures, which are repeated as often as the figure, will have a decorative value of their own. In the table setting the motive is made up of plate, cup, spoon, knife, fork, and other dishes. Unless these are arranged in the same way at each place, there is no motive and therefore no possibility of securing beauty by repetition. There will be instead a collection of figures of different sorts. Again, the arrangement of the dishes at each place determines the shape of the space between the places. These may with care be made attractive to the eye. There is an opportunity also to create the beauty of symmetry by placing the larger articles in the center and producing a balanced effect with the others. All this can be done without disregarding the primary consideration in table setting as in all art—utility and convenience.

In the consolidated school one teacher might be selected to give a lesson in cooking to a few pupils every noon and to supervise the serving of the luncheon. This would tend to lengthen her working day, which by way of compensation would have to be shortened at the beginning or at the close. It would seem as if this ought to be possible by uniting her class with another for singing, the discussion of current history, the reading of a story, or other general exercises.

In the best consolidated school I have visited the relation of the teacher to the noon hour had not reached a higher ideal than that of police duty. The teachers took turns at noon and each stayed twenty minutes, but this was merely to keep the pupils out of mischief.

The use of the fireless cooker for lunches in rural schools.—The system of transportation, which is a necessary feature of the consolidated school plan, makes it possible to carry food from the homes in quantities large enough for all the pupils. A stew or soup might be prepared at one of the homes and sent to the school in a fireless cooker, to be eaten at noon. This is an opportunity for cooperation between housekeepers and school authorities, or, even better, a chance for the pupil to make practical application at home of instruction given in school.

HIGH-SCHOOL LUNCH ROOMS.

While the school luncheon for young pupils is in the experimental stage, the lunch for high-school pupils may be considered to have passed that point and to have become an established part of high-school training. There are few high schools in the larger cities of the country that are not equipped with lunch rooms. These lunch rooms have been developed in response to what may be considered an educational need. Their problems have never been complicated by the existence of extreme need among the pupils. This is of course a sad commentary on our social conditions, indicating as it does that few of those upon whom poverty presses ever reach the high-school stage of education. One of the very significant revelations of the report on underfed children made in Chicago was the fact that the per cent of obviously underfed pupils decreased very rapidly in passing from the lower to the higher classes. Doctor MacMillan, of the department of child study of the Chicago public schools, reports that of children of kindergarten age 15.9 per cent were undernourished, while of those in the fifth grade and above only 5.9 per cent were found in this condition. This report did not include high schools, where doubtless the per cent would be greatly below that in the highest class of the graded schools. We may therefore consider that the standard in high-school lunch rooms has been set by educational ideals rather than by the pressure of want among the pupils.

The high-school lunch rooms in different cities vary greatly in equipment and in the quality of the food served. This is probably due to different ideas concerning the possibilities of the lunch hour which prevail among educators. There seems to be a general agreement that patrons should pay the cost of the food and its preparation and the running expenses of the lunch room. Difference of opinion exists in those who control the policy of the lunch room, not on this point, but with reference to the educational value of ideals and of æsthetic surroundings and the opportunity to observe the amenities of life. Where these are highly valued, it is considered worth while for the school to pay a trained person to superintend the lunch room, and to have the rooms made attractive and the lunch daintily served.

Informal teaching in house furnishing.—Since the lunch room must in its appointments be more like the rooms in dwelling houses than the class rooms are, there is a good opportunity to make it a means of education in house furnishing. It is particularly desirable to have its construction, its decoration, and its furnishing of such a character that they may serve as models. The tables, the chairs, the dishes, and the silver all have their lessons to teach. First among these lessons is that of fitness to purpose. One of the important points to be emphasized in the lunch room is of course the need of absolute cleanliness. There should therefore be no unnecessary places for the collection of dust on the tables or chairs nor of dirt on the silver. Although our present preference for plain furnishings is often manifested in irrational forms, it certainly has a rational basis both in art and in science.

Another important lesson which may be taught by the furnishings is that of beauty of outline. Of two tables equally plain, one may please the eye very much more than the other because of that somewhat elusive element, the beauty of proportion. Of two plain spoons, one may have a pleasing and the other an unattractive outline. The differences in cases of this kind defy description by words, and besides, the taste of people varies greatly. It is always safe, however, to suppose that the form which was originally given a useful article like a table, a cup, or a spoon, to make it serve its purpose, and which has been refined to suit the taste of generation after generation, has something to teach to the present generation. It is then safe to be guided, in cases where new needs have not made new forms imperative, by the accumulated taste of our ancestors, rather than by the craze for novelty which prevails at present among dealers. If that which is rational in our search for old forms be carefully separated in thought from that which is irrational, it may, like that which is reasonable in our desire for simplicity, be made the subject of the informal art education of the schools.

Carefully selected furnishings may be the means of teaching students to respect beauty of outline and to see the folly of unnecessarily destroying it. Frequently the rim of a glass dish which would be beautiful in its simple outline is cut or pressed until it resembles the teeth of a saw. Articles of this kind, in which decoration is the means of destroying real beauty, should be excluded from the furnishing of a school lunch room.

A good outline is not only worthy to be preserved; it is worthy also of emphasis. If a spoon is well shaped, its attractiveness may be increased by decoration which follows closely and emphasizes the beauty of the form. To add decoration which destroys the graceful line is unfortunate, even if the decoration be in itself beautiful. The beauty of the old gold-band china was doubtless due to the fact that the decoration on the majority of the pieces, the plates, cups, and saucers, was the means of bringing out a form which has always pleased the eye, namely, the circle. When it serves a humble but exceedingly useful purpose of this kind, decoration need not be elaborate, but when a figure is set down in the middle of a plate it must rest on its own merits and prove itself beautiful enough to be there and to be repeated in hundreds of other plates.

The possibilities of training the eye to appreciation of color and of harmonious combinations also exist in the lunch room. An untrained person is likely either to be timid in the use of color and to resort to lifeless neutral tints, or to be bold and put together incompatible hues.

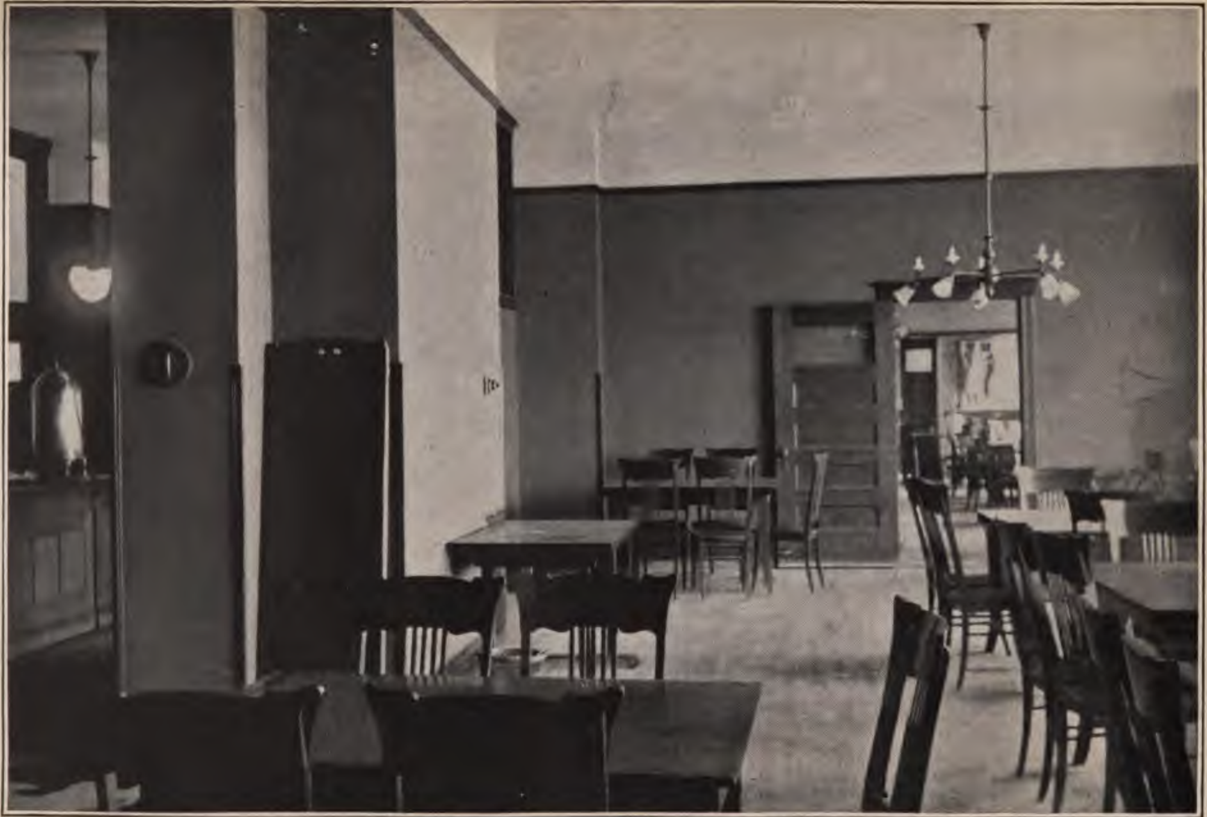
I am aware that the use of the lunch room as a means of culture must necessarily in many schools be a secondary consideration. It should, however, not be overlooked without sufficient reason, either in the planning of the room or the selection of a superintendent.

Informal teaching of hygiene.—It may be permissible to overlook artistic appreciation in the selection of a person to direct the feeding of children, but it can never be permissible to overlook appreciation of the significance of what may be termed bacteriological cleanliness. It is difficult, to be sure, to hold lunch-room managers up to a very high standard in this respect, while schools and colleges continue the remarkable practice of giving formal courses in bacteriology and at the same time encouraging the use of common drinking cups; but the union of theory and practice must be effected somewhere, and those in charge of lunch rooms must understand the principles of preventing the spread of communicable diseases.

A bubble fountain in a lunch room is safe, saves dishes, and tends to prevent drinking with the meals. It may not be practicable for exclusive use, but, as a supplementary device, it serves to protect health and to save work. Such a supplementary fountain is in use in the lunch room of the Roxbury High School.

Lewis Institute, Chicago.—The lunch room at Lewis Institute, in Chicago, has served as a model for many high-school lunch rooms. It may therefore be described here, although the school is not a public one nor is it exclusively devoted to work of high school grade.

Before the erection of the building in 1896 the trustees set aside a beautiful, light, and airy room on the fifth floor for a lunch room. The color, furnishing, and decorations of the room were all carefully selected. There can be no doubt that this action influenced other schools in Chicago, for the practice of putting lunch rooms into unattractive basement rooms, so common elsewhere, has never gained a foothold in that city. This lunch room may be commended also for the fact that those who serve food do not handle money. The check system used here prevails in the high schools of many cities, but in other cities the same person takes the money and handles the food. Lewis Institute, though a private school, sets a good example in the introduction of democratic practices into the lunch room. Teachers, students, and employees eat in the same room and wait upon themselves except upon rare occasions. If a teacher has guests and wants



LUNCH ROOM AT LEWIS INSTITUTE, CHICAGO, SHOWING THE COUNTER, AT THE LEFT, AND ONE OF THE CASTS USED FOR DECORATION.

door, if there is no objection on the ground of appearance, and also over the counter should be the bill of fare. As some dishes are served every day and other dishes only occasionally, there should be a chance for change in the bill as well as for retaining permanent items. One plan is to have a wooden rack so made that stiff cardboard strips can be slipped into it. These strips can be marked by means of a rubber stamp with such items as lettuce-sandwiches, cocoa, etc. This is perhaps the neatest arrangement. Some schools have signs on large pieces of paper, one permanent, the other prepared each day.

Near the door on the counter should be a pile of small trays, so that each student can provide himself with one. Foods which can be most easily carried, like sandwiches, should be next upon the counter. Soup and cocoa should not be carried farther than necessary. At the end of the counter should be a person to estimate the price of the meal and give a check. If the price of each dish is 5 cents the computation is simplified. There are, however, objections to this, because it is likely to give a mistaken idea of the value of different food materials and thus to defeat one of the educational purposes of the work. The New York schools have a system of paper checks, while in Chicago celluloid checks are more commonly used. The first are perhaps cleaner because they are used but once. The celluloid checks can, however, be boiled after each meal, though the temptation is not to do this.

It is convenient to have glasses, silver, and napkins placed at some distance from the end of the counter. Students frequently set their trays down at their chosen places before supplying themselves with these things, and it prevents congestion at the end of the counter to have them in a different place. A bubble fountain in addition to an ordinary fountain with glasses, as at the Roxbury high school, is desirable. I have never seen any very satisfactory arrangement for silver. It should be so arranged that a person in selecting a piece for himself could not touch the bowls of other spoons or the blades of knives or the tines of forks. Even in the best of lunch rooms this point seems not to have been carefully worked out.

The attractiveness of the room is greatly enhanced by flowers on each table. This involves a small piece of work which a woman's club could easily undertake. The cheapest vases of good appearance are the plain glass cylinders to be obtained at chemical supply stores. A growing plant on each table may, of course, be used as an alternative.

A provision of 12 square feet in the lunch room proper for each person is sufficient if the pupils are to sit at table. This does not include the space in front of the counter and cashier's desk. Round tables are more economical of floor space than square tables. They give, however, a smaller surface for dishes in proportion to the number of people who can draw up comfortably around them. They are for this reason most suitable for places where there are waitresses and where dishes of two courses are never on the table at the same time.

A plan adopted in the Western High School, of Washington, D. C., for economizing floor space is to have benches around the outside of the room, thus saving the space between the chairs and the wall. This makes a pleasing variety and gives a not unattractive appearance to the room.

THE COST OF FOOD.

The bills of fare in high schools where ideals prevail do not differ greatly in content or price.

Lake View High School, Chicago.—The following bill of fare, used in the Lake View High School, Chicago, on May 14, 1908, indicates the prices at which food may be sold in a lunch room where equipment is paid for by the board of education and where running expenses are met by the sales of food. This is the school referred to above in which a woman's club has assumed the management of the lunch room for the good it may do and not for profit.

LAKE VIEW HIGH SCHOOL.

MENU.

Thursday, May 14, 1908.

	Cents.
Vegetable soup	5
Baked beef pie	5
Mashed potatoes	5
Stuffed peppers	5
Baked beans	5
Asparagus on toast	5
Macaroni and tomatoes	5
Salmon creole on toast	5
Tomato-cucumber salad	5
Salads: Potato, 3 cents; salmon	5
Cold boiled ham	5
Egg and olive sandwich	5
Hot muffin and butter	5
Pies: Apple, lemon, cream	5
Chocolate pudding	5
Fruit jelly	5
Sliced pineapple	5
Strawberry shortcake	5
Chocolate eclair	5
Cream fingers	5
Sliced oranges	5
Chocolate cake	5
Ice cream: Vanilla, caramel, chocolate	5
Sundae: Pineapple, chocolate	5
Coffee, 5 cents; cocoa, 3 cents; milk	2
Tea, per pot	5

WESTERN HIGH SCHOOL, WASHINGTON, D. C.

The following bill of fare was used in the Western High School Washington, D. C., on October 16, 1908:

	Cen
Cream of pea soup	
Beef, ham, and egg sandwich	
Olive sandwich	
Cocoa	
Milk	
Apple float	
Jelly cake	
Gingerbread	
Sugar cookies	
Sarsaparilla	
Ginger ale	
Milk chocolate	
Sweet chocolate	
Apples	1 and
Bananas	1 and

In this high school the board provided the original equipmen The operation is under the direct supervision of the principal, Mi Westcott, who hires a superintendent.

That which can be served when the provision for service is greate but the risk of having food left over is less, may be indicated by t following typical bills:

ETHICAL CULTURE SCHOOL, NEW YORK CITY.

September 30, and October 1 and 2, 1908.

Lunch for 35 cents to be ordered by the week in advance:

September 30	Beef loaf. Sliced tomatoes. Baked potatoes. Pears.
October 1	Chicken. Rice. Apple sauce. Ice cream.
October 2	Lamb. Beans. Mashed potatoes. Chocolate cake.

Articles to be bought to supplement lunches brought from home:

		Cents.
September 30	Beef soup	5
	Beef loaf	15
	Sliced tomatoes	10
	Sandwiches:	
	Ham	8
	Lettuce	8
	Sponge cake	5
	Pears	5

		Cents.
October 1	Tomato soup	5
	Chicken	17
	Apple sauce	5
	Sandwiches:	
	Meat	8
	Nut and celery	8
	Ice cream	10
	Spice cake	5
	Grapes	5
October 2	Chicken soup	5
	Lamb	15
	Lettuce salad	10
	Sandwiches:	
	Chicken	8
	Cheese and brown bread	8
	Chocolate cake	5
	Plums	5

THE COST OF EQUIPMENT.

We are indebted to Miss Helen Kinne, of Teachers College, New York, for a most carefully tabulated account of the expenses of equipment in two typical lunch rooms, one that of a Boston high school, the other in the Horace Mann School, New York.[a]

In the former, owing to the adoption in Boston of the plan of sendng food to the schools from a common kitchen and not furnishing opportunity to the pupils to sit at tables while eating, the cost of equipment, including a counter and the apparatus necessary for keeping food warm and serving it, amounted to only $300. In the Horace Mann School, where 600 pupils are served daily, the cost of equipment (including chairs, tables, counter, and all the table furnishings) was about $2,500. The items are as follows:

1. The lunch room:	
Lunch counter and cashier's desk	$292.00
Brass rail in front of counter	79.00
42 tables, at $11.75	493.50
26 dozen chairs, at $17.50 per dozen	455.00
Steam table (in exchange for old)	97.00
Tea urn	45.50
Copper urn, nickel-plated (for water)	7.15
Nickel-plated drainer under cock of urn	3.75
Nickel-plated drainer, with drain connection	8.00
Water-cooler	54.00
2. Kitchen:	
Refrigerator	125.00
Gas range	130.00
Partition, tables, kitchen closet, and dressers	705.00
Total	2,494.90

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[a] "School Luncheons," by Helen Kinne, in Teachers College Record, March, 1905.

III. FOOD FOR CHILDREN.

Those who have charge of the selection of food for children at home or in the school should have some knowledge of the proper proportions of the different kinds of food needed to maintain a child of school age in proper physical and mental condition. For this reason the subject will be discussed here in some detail. As a preliminary to the discussion it may be well to note the basis of the generally accepted classification of food principles, and also to define the more common terms and phrases used in dietetics.

CLASSIFICATION OF FOOD PRINCIPLES.

The consumption of food has two purposes: first, to build up and repair the body tissues; second, to supply the energy needed by the body in carrying on its vital processes and in muscular work.

For the former purpose nitrogenous material is required, nitrogen being an essential constituent of the body cells. This gives us our first class of foods, the nitrogenous foods, or proteins, as they are commonly called, from which the body must obtain the nitrogen needed for the building up and repair of its cells. For the second purpose, that of furnishing energy to the body, the nitrogenous foods, or proteins, are also useful, but since after a given point is reached in the amount of these foods supplied, the body finds difficulty in eliminating their waste products, it must depend largely for the supply of energy needed upon other forms of food, i. e., the so-called fuel foods. Chief among these are fats and sugars and starches, the last two being grouped together under the common term carbohydrates. Among the carbohydrates also belong cellulose, a substance abundant in fruits and vegetables, and dextrines, which are produced by the action of dry heat on starch, and are found in the crusts of bread and other places where the starch has been subjected to high temperatures. Of the fuel foods the one that is most easily absorbed is sugar, the one that remains the longest in the stomach is fat.

To secure a skillful combination of the proteins on the one hand and the fats and carbohydrates on the other, in such proportions as to provide the necessary material for the building and repair of the body and of energy for its work, and at the same time not to complicate the process of excretion, is one of the problems of dietetics.

Dietaries.—Dietaries, or statements of the amounts of food needed or taken by people of various classes, are usually expressed in terms of proteins, fats, carbohydrates, mineral matter, and fuel value. The fuel value is given in terms of the calorie,[a] which is the unit commonly used in measuring the heating power of a substance, or its power to do work when it is burned and used for running machinery.

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[a] The calorie roughly defined is the amount of heat necessary to raise a pint of water 3⅞ degrees Fahrenheit, or, more accurately, the amount needed to raise a kilogram of water 1 degree centigrade.

Since fats and carbohydrates are to be regarded as fuel foods and are to a certain extent interchangeable, dietaries are sometimes given merely in terms of proteins and total fuel value. For instance, we frequently find statements of this kind: A man at hard muscular work needs daily 6 ounces of proteins, and besides this, fuel foods enough to bring the fuel value up to 3,000 calories.

The gram is frequently used as a unit of weight in calculating dietaries instead of the ounce, because it is smaller and carries us less into the use of fractions and decimals. The gram is about one twenty-eighth of an ounce.

The composition of food materials is given in books on dietetics in two ways: sometimes just as the food comes from the market and sometimes as it is after the waste has been removed. The proteins of an egg, for example, are 12 per cent of the whole egg, but 13 per cent of the part we eat. The analysis of the whole food is usually designated as "as purchased," that of the food after the waste has been removed as the "edible portion."

At times it is convenient to be able to refer to the food principles of a food as distinguished from the water. For example, 100 ounces of milk contain 13 ounces of the various food principles and 87 ounces of water. The 13 ounces is referred to usually either as "total nutrients" or the "dry substance."

With these explanations in mind, what follows should be clear even to those who are unfamiliar with the terms used in dietetics.

THE AMOUNT OF FOOD NEEDED.

While much valuable work is being done with the purpose in view of determining the amount of food which a person of a given age, sex, and degree of activity should eat, not enough has been accomplished as yet to make it possible to lay down any hard and fast rules. The most commonly accepted estimate is that of Voit, who gave 118 grams of proteins (about 4 ounces), 56 grams of fat (about 2 ounces), and 500 grams of carbohydrates (about 17½ ounces), with a total fuel value of 3,055 calories, as the amount of the various nutrients needed daily by an adult at moderate muscular work. People in this country have never conformed to this standard, the most commonly accepted American standard being that of Atwater, namely, 125 grams of proteins, 125 grams of fat, and 450 grams of carbohydrates, with a fuel value of 3,520 calories.

As a matter of fact, the tendency seems to be away from any attempt to tell people how much they should eat, and in the direction of an attempt to find out how much people do eat, as a preliminary step toward determining the ideal ration. In a bulletin called "Food and Diet in the United States,"[a] Dr. C. F. Langworthy makes the statement that the average adult in the United States is daily supplied with 100 grams of proteins, 150 grams of fats, and 350 grams of carbohydrates, with a total fuel value of 3,240 calories. He finds that children of from 2 to 5 years of age eat about four-tenths of this amount, and those between 6 and 9 eat five-tenths of it, while girls and boys of from 10 to 12 years take from six-tenths to nine-tenths.

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[a] "Food and Diet in the United States," by C. F. Langworthy. Reprint from the "Yearbook of Department of Agriculture," 1907.

The following table, taken from the publication just mentioned, shows the comparative amounts of food taken by different classes of people. A man in full vigor is selected as the unit for comparison and is given a value of 100.

TABLE I.—*Relative values for food requirements of persons of different ages and occupations, as compared with a man in full vigor at moderate work.*

Man, period of full vigor:	
At moderate work	100
At hard work	120
Sedentary occupation	80
Woman, period of full vigor:	
At moderate work	80
At hard work	100
Sedentary occupation	70
Man or woman:	
Old age	90
Extreme old age	70–80
Boy:	
15 to 16 years old	90
13 to 14 years old	80
12 years old	70
10 to 11 years old	60
Girl:	
15 to 16 years old	80
13 to 14 years old	70
10 to 12 years old	60
Child:	
6 to 9 years old	50
2 to 9 years old	40
Under 2 years old	30

Doctor Langworthy adds that while the figures given refer to what people do eat rather than to what they ought to eat, they are probably not far from representing real needs.

DIETARY FOR A CHILD OF FROM 6 TO 9 YEARS OF AGE IN TERMS OF A BILL OF FARE.

The figures given above are, of course, more or less unintelligible until they have been interpreted in terms of our ordinary bills of fare. For this reason there is given below a day's menu which would supply the amount of food taken by the average child of from 6 to 9 years. This is one-half of the amount for an adult—or 50 grams of proteins, 75 grams of fat, and 175 grams of carbohydrates.

A day's menu for a child of 6 to 9 years of age.

Breakfast:
- Orange of medium size.
- Cooked oatmeal, one-third cup.
- Milk and cream mixed, one-half cup.
- Toast, 1 slice.
- Butter, one-half cubic inch.
- Milk to drink, 1 glass.

Dinner:
  White fish, 3 ounces as purchased, or 1½ ounces edible portion.
  Potato, 1 small.
  Celery, cooked in milk, three-eighths cupful.
  Bread, 1 slice.
  Butter for bread and potato, 1 cubic inch.
  Rice pudding, one-half cupful.
Supper:
  Egg.
  Toast, 1 slice.
  Butter, one-half cubic inch.
  Milk, 1 glass.
  Prunes, 3, cooked with one-half level tablespoon of sugar.
  Cookies.

The weight and composition of the various articles of food in this bill of fare are given in the following table:

TABLE II.—*Weight and composition of the foods given in the foregoing bill of fare.*

Articles of food.	Weight.	Components.				Calories.
		Proteins.	Fats.	Carbohydrates.	Mineral matter.	
	Ounces.	*Grams.*	*Grams.*	*Grams.*	*Grams.*	
Milk	18½	17	20	25	3.7	376
Cream	1¼	1	7	1	.2	71
Fish	3	9	2	....	.6	61
Bread	3½	9	Trace.	52	1.1	266
Egg	2	7	5	....	.5	79
Rice pudding	4	5	5	24	.9	165
Rolled oats	½	2	1	10	.3	58
Cookies	½	1	2	11	.1	68
Potato	2	1	Trace.	11	.6	48
Prunes	1¼	1	....	21	.7	90
Celery	2	Trace.	Trace.	2	.5	11
Sugar	¼	....	....	7	.0	29
Orange	4	Trace.	Trace.	10	.4	43
Butter	1¼	Trace.	30	....	.1	282
Total	44	53	72	174	9.7	1,647

The significance of the above dietary.—The above dietary is not given for the purpose of recommending any of the specific foods as preeminently healthful or digestible, but rather as a means of so nterpreting the statement that the average child of from 6 to 9 years eats 50 grams of proteins and 75 grams of fat and 175 grams of carbohydrates that it may be made the basis of discussion. The amounts of the various food materials in the dietary give as nearly the amounts of nutrients mentioned as any that could be described without going too much into detail.

Mrs. Ellen H. Richards, in "First Lessons in Food and Diet,"[a] gives a list of foods which might constitute the daily diet of a child of from 6 to 9 years. These foods contain 56 grams of proteins, 47 of fat, and 209 of carbohydrates. This amount of food could be secured by reducing the butter in Table II to one-half ounce, omitting the cream, adding a slice of bread, and increasing the potato and prunes by one-half. If these modifications were made in Table II we should have a dietary in which more of the fuel came from starch and sugar and less from fat.

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[a] "First Lessons in Food and Diet," by E. H. Richards. Boston, Whitcomb & Barrows, 1904.

SUGGESTIONS FOR FEEDING CHILDREN, BASED ON TABLE II.

Suggestion I.

Become acquainted with the approximate composition of some of the very common foods, for example, milk, meats as a class, and cereals. For this purpose a bulletin for sale by the Superintendent of Documents, Government Printing Office, Washington, for 5 cents, is the best aid.[a] Learn to classify these foods roughly into 3 divisions, putting into one division those rich in proteins, into another those useful chiefly as fuel, and into a third those which contain little besides water. Note (1) that in Table II the milk, fish, and egg provide 33 grams, or 62 per cent of the proteins, but only 509 calories or 31 per cent of the fuel, leaving only 38 per cent of the proteins but 69 per cent of the fuel to be provided by other foods. These foods, and with them the meats, chicken, cheese, and dried beans and peas, fall in the class of those rich in proteins. Note (2) that the bread, butter, cream, rolled oats, potatoes, cookies, prunes, and sugar provide 912 calories, or 56 per cent of the fuel, and only 15 grams or 28 per cent of the proteins. These foods fall in the class of fuel foods. With them belong all cereals, breads, cake, honey, and preserves. Note (3) that the oranges and celery, though weighing 6 ounces and constituting 14 per cent of the total weight of the food, contain no appreciable proteins nor fats, only 12 grams or per cent of the carbohydrates, and furnish only 54 calories or 3 pe cent of the fuel. They belong to the class which even if eaten freel make no large additions to the dietary. In this class fall also mos green vegetables and watery fruits.

Suggestion II.

Know in a general way how much protein material a child of a give age requires. This is 40 grams for one between 2 and 5 years of age 50 grams for one between 6 and 9, and between 50 and 100 grams fo older children. See that the child gets two-thirds of this amoun from milk and eggs, or from milk, eggs, and other animal foo remembering that a glass of milk contains about 8 grams of protein an egg about 7 grams, and an ounce of beef (without waste) abou 5 grams. A child of from 6 to 9 years would get two-thirds of th proteins he needs daily, i. e., 38 grams, from 1 egg and 3 glasses of milk. The other third will in the case of the normal child be secured from the bread, cereals, and vegetables which he can be depended upon to eat.

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[a] "The Chemical Composition of American Food Materials," by W. O. Atwater and A. P. Brya Washington, Government Printing Office, 1906. 87 p. 8°. (U. S. Office of Experiment Stations. B letin no. 28, rev. ed.)

SUGGESTION III.

Exclude from the child's diet all "made dishes," rich sauces, salads, and fried foods. Limit the fat to that secured from milk and eggs and from the butter and cream used at the table. If this course is followed there is little danger of serving too much fat. The importance of this injunction can not be overestimated. The objections to such foods as pastry, fritters, escalloped dishes, and rich salads are three: First, they introduce the most indigestible substances into the diet, heated fats and other foods thoroughly mixed with heated fats. Second, it is impossible to use such foods without introducing much more fat than is thought best even by those who make liberal estimates. I have not uncommonly found the fat running up to twice the amount suggested by any student of dietetics as desirable in a bill of fare that seemed quite ordinary. This was due to the use of butter and other fats in cooking and of salad oil. Third, the use of complicated dishes makes it almost impossible to get even an approximate idea of the fat that is being served without long calculation, while with plain unmixed food materials the problem is quite simple. Note that in our bill of fare the milk and egg furnish 24 grams of proteins and 25 grams of fats. In selecting the amount of these foods that would assure two-thirds of the proteins needed we would therefore get an equal amount of fat. The 3 glasses of milk and 1 egg suggested above provide about 35 grams of fat. It is necessary therefore only to see that the child's bread is well buttered and very nearly the necessary amount of fat is provided, or if we wish to calculate more closely we may count 10 grams of fat to each glass of milk, 45 grams to a glass of cream, and 5 grams to an egg.

SUGGESTION IV.

Do not try to limit bread and cereals, except when it takes sugar to make them acceptable. Limit sugar to small amounts taken after meals in desserts or in the form of candy. If instead of sweets, zwieback is given when the child is hungry between meals, and no sugar is used on cereals, there is little danger of the carbohydrates running too high.

SUGGESTION V.

Do not forget to give the child fruit and vegetables every day. If eaten at meals there is little danger of giving too much of this kind of food, providing it is fresh and properly prepared.

SUGGESTION VI.

In enlarging the dietary from time to time as the child grows, make no experiments. Do not ask yourself, "Why not give it?" but "Why give it?" If you do this you will exclude not only all foods which are notoriously indigestible, but also foods about which a suspicion hangs. The suggestion applies not only to the selection of food materials, but also to the methods of preparation.

THE ENLARGEMENT OF THE DIETARY AS THE CHILD GROWS.

The foods in all of the three classes, the proteins, the fats, and the carbohydrates, must of course be increased in amount as the child grows. There must be more milk and eggs, more bread, cereals, and butter, and more fruit and vegetables. While the quantity of each must be increased, the variety may be. There is usually, however, too much anxiety to increase the variety both of the foods and of the methods of cooking.

INCREASE OF NITROGENOUS FOODS.

When a child is weaned he changes a food which contains 2½ per cent of proteins for one which contains 3½ per cent. This step must be taken gradually, and for some time after cow's milk of full strength has been given there is no need to add to the variety of nitrogenous foods. By the time the child is a year and a half old a very soft boiled egg may be given. Some physicians recommend the early addition of scraped meat. Considering the fact that the child can up to the age of 9 get all the proteins he needs from 4 glasses of milk, 1 egg, and the bread and cereals he takes, there seems little reason to add meat to his dietary.

Milk, eggs, etc.—Milk may be given as a beverage and also in the form of milk soups and gravies. Here the question of the method of preparation arises. The quick method consists in heating flour in butter and adding the hot liquid. There lurks, however, about this method of preparation a strong suspicion of indigestibility, and a much safer way for the child's food is to mix the flour with a little cold milk and add it to the remainder of the milk which has been heated. Butter, if used at all, is added just before serving. Two level tablespoonfuls of flour to a cupful of milk make a sauce thick enough for milk toast, to mix with codfish or chipped beef, or to pour over vegetables. If one-half a tablespoonful of flour is used we get the right consistency for a thin milk soup. This may be flavored with such vegetables as onions, peas, cauliflower, asparagus, or tomatoes, small amounts of which left over from a previous meal may be thus utilized. A small amount of grated cheese may also be used for flavoring.

The amount of milk in the diet may be further increased, if necessary, by cooking cereals in milk and by the use of junket, baked milk pudding, and such puddings as the old-fashioned rice pudding and poor man's pudding, in which equal parts of cereal and sugar are baked with 12 times their volume of milk. For example, one-third cupful of sugar, one-third cupful of rice, and 1 quart of milk.

Eggs should be poached or soft boiled rather than fried or served as omelets. If eggs are kept in hot water twenty to forty minutes, the yolks become mealy. They can in this form be sifted over milk toast or seasoned and spread on bread. The whites are much less digestible; if used, they should be chopped very fine.

Chicken, preferably the white meat, which has a short fiber, and those fish in which there is little fat mixed with the muscle fiber, like trout and whitefish, may be added to the dietary after milk and eggs.

Dried beans and peas are highly nitrogenous. If served with their skins, however, they are indigestible. Purées which preserve the more nutritious part and reject the skins may properly be given to children.

Meat for children.—On the subject of meat for children Dr. La Fayette B. Mendel recently said before the New Haven "Mothers' Club:"[a]

> It has often seemed to me that many parents display an excessive zeal in foisting improper diets upon their children. They fail to realize the comparative limitations of the youthful digestive tract, while the children too soon learn to imitate the customs of their elders. This is true, for example, in the habit of eating meat, a stimulating and concentrated proteid food. "The colt or calf does not thrive on a diet of rich corn meal, though it may be very proper for the horse or cow. Carnivorous animals, be it noted, do not allow their young to have meat until quite a time after they have all their teeth fully developed, though apparently it would be their proper food. Meat given to kittens or puppies invariably produces convulsions."[b] It is said that cats will take away meat from their kittens when it is given to them, even up to the time when they are three months old.

INCREASE IN THE FUEL FOODS.

Mrs. Richards has made the chart given below[c] to show approximately the kinds and amounts of the three chief food principles, namely, the proteins, the fats, and the carbohydrates, required by an average person of any age. From this chart we see that while there is a gradual increase in the amounts of fat and proteins needed up to the age of 20, the required carbohydrates increase not gradually but very rapidly.

Mrs. Richards calls our attention to the fact that we may get a hint of the general way in which the food of children should be modified from time to time by studying the habits of animals whose food is simpler than ours. The chick, for example, before it leaves the she finds all the material needed by its developing body in the yolk of tl egg, which consists of proteins and fats. After it leaves the she and begins to run about it must have more fuel, and the animal foc which it finds or is given, the worms, bugs, and milk curd, is suppl mented by large quantities of grains which are rich in starch, a forı of fuel which can be quickly utilized.

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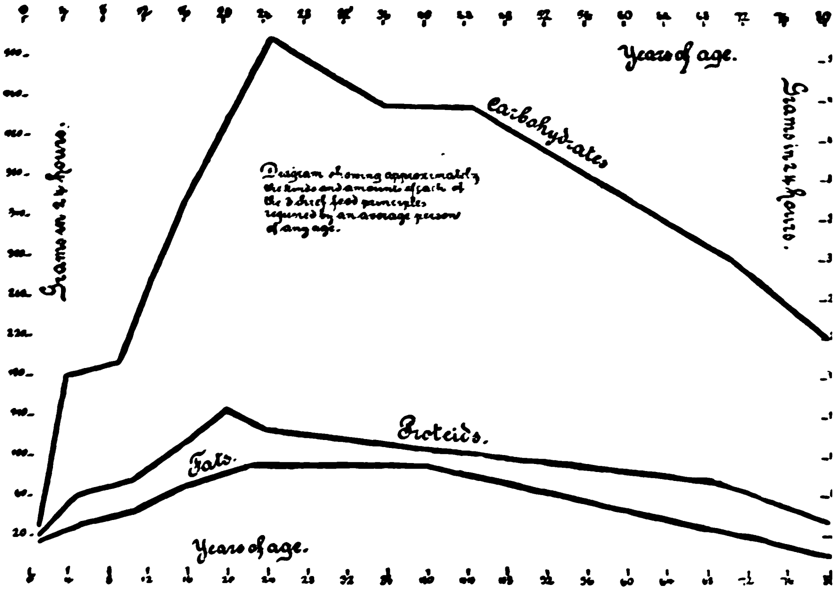
[a] "Childhood and Growth," by La Fayette B. Mendel. New York, F. Stokes. 1907.

[b] Hoy, "Eating and Drinking," p..252.

[c] Reprinted from "First Lessons in Food and Diet," referred to on page 31.

So the child, at the time of weaning, which corresponds rath closely to the time when he begins to stand on his feet and to wall must be supplied with fuel for his increasing activity. The safe way in which to meet this new demand is by giving increasingly lar amounts of foods which contain well-cooked starch. The first foo of this kind to be given are thoroughly cooked cereals and thoroughl baked bread at least one day old, toast, or zwieback.



Cereals.—Cereals for children should be cooked overnight or a equal number of hours during the day. When a coal fire is kept ove night this is a simple matter. Every gas stove should have a simmer upon which the water in a double boiler can be kept hot or boilir slowly. This makes long cooking possible, safe, and inexpensiv A third expedient for cooking cereals is the fireless cooker. It shoul be noted that cereals prepared after the cook rises in the mornir are seldom sufficiently cooked for young children. On the subje of the cereals which are sold ready to be eaten it may be said th while it is possible to know that those which are prepared at hon are thoroughly cooked, these must be taken on faith.

Cereals served with milk alone, or better still with "half-and-half," make an almost perfectly balanced ration. The addition of sugar destroys the balance, and makes it extremely probable that in the diet as a whole the proper per cent of carbohydrates will be exceeded.

Milk toast.—It is unfortunate that milk toast, which is the best and safest form of nitrogenous food and at the same time the best and safest form of fuel food, should so seldom be well prepared. Bread which has been hastily browned and perhaps scorched on the outside while the inside remains soft is poor food at the best, but when soaked in lukewarm milk it is most unpalatable.

In the preparation of milk toast the bread should be slowly heated until the outside is an even golden brown and the inside is dry. Every dish used in serving should be hot. One of the most satisfactory ways is to put the hot milk into a heavy heated pitcher and pour it over the toast at the table. If the milk is thickened it can be allowed to stand on the toast for a longer time.

Sweets for children.—If we use the word "sweets" instead of the word "dessert," we separate a class of foods like jams, stewed fruits, cookies, whose chief ingredient is sugar and which constitute a very legitimate part of the child's diet if given at the right time, from pie, doughnuts, and fritters, which contain a large per cent of cooked fat and are therefore more difficult of digestion. The amount of sugar in our typical menu is 21 grams (7 in the prune sauce, 9 in the rice pudding, and 5 in the cookies), or three-fourths of an ounce. This would amount to 17 pounds a year. This amount could probably be increased by half without injury, particularly if the fat were reduced. Seventeen pounds for a child of 6 to 9 years would correspond to 34 pounds for an adult. Perhaps the best way to regulate the sugar supply is to set a limit to the amount of sugar used in cooking for the family, 34 pounds a year for each grown person and a corresponding amount for the children (see Table I), and then give the child one-half ounce daily in the form of sugar or pure candy.

Nutritious puddings.—Such desserts as rice pudding, custards, ice cream made with custard, and junket, should hardly be classed as sweets. Note that in the rice pudding the proteins are one-seventh of all the nutrients, while in the prunes and sugar they are only one twenty-ninth, and in the cookies one-fourteenth. As given above, rice pudding is an almost perfectly balanced food. The same may be said of poor man's pudding made with molasses instead of sugar and of Indian pudding made with corn meal in place of rice. Junket is also a balanced ration rather than a sweet, while a custard made with 4 cups of milk, 6 eggs, and one-half cup of sugar, should be ranked with the tissue-forming foods.

INCREASE IN FRUITS AND VEGETABLES AS THE CHILD GROWS.

The importance of fruits and vegetables can not be overestimated. The fruits should be given first in the form of fruit juices, scraped apple, and the pulp of baked apple. Later stewed fruits and thoroughly fresh and ripe, but not overripe, raw fruit may be added. Prunes are a good food and invaluable in the cure of constipation. They should be thoroughly cooked in water alone, the sugar being added after the skins are soft. Bananas offer a great problem. They are usually half ripe and contain starch. They are therefore hardly fit to eat raw. Besides this, their consistency is such that they are likely to go into the stomach in large pieces. It is a wise mother who can succeed in eliminating them from her children's bill of fare, particularly in cases of weak digestion.

Cooked versus raw fruits.—There is no doubt that safety lies in cooking most of the fruits that are served to young children. Of course circumstances must be taken into consideration. To a healthy child with no tendency to intestinal disturbances raw fruits offer few dangers, particularly in cool weather and at times when there are no prevailing epidemics. If there is a tendency to looseness of the bowels, however, no raw fruit should be given.

The palatability of freshly cooked fruit is probably underestimated, partly because the fruit is often poorly prepared, and partly because it is associated in the thought with canned fruits.

Prunes.—Prunes offer an example of a fruit that is frequently poorly prepared, being insufficiently cooked and served in a watery liquid. If cooked in the way mentioned above the prunes become soft and rich and the juice is like a jelly. The same method, consisting in long cooking in water only and the addition of sugar only after the skins are soft, should be followed in the cooking of all dried fruits. Prunes or other dried fruit cooked in this way may easily be spread upon bread for the school luncheon.

Apple sauce.—There are few dishes which are oftener poorly prepared than apple sauce is. A sirup should be made with two level tablespoonfuls of sugar, or one rounding tablespoonful, for each apple, and the same amount of water. After it has been boiled for a short time, the apples cut into eighths or smaller pieces should be added a few at a time and cooked until soft and transparent. By this means the apple retains its form and the juice is so thick as to cling to the fruit after cooking. The difference in taste between such apple sauce and the mush which is often served by that name is very great and should be noted because of the value of apples in the diet. Well-made apple sauce can be carried in a cup in the lunch box with little danger of spilling.

Freshly cooked fruits.—Freshly cooked fruits—berries, peaches, and pears, for example—are a neglected item of diet considering their safety, wholesomeness, and palatability. They suffer, of course, as noted above, through being associated with canned fruits. There is, however, no comparison between canned strawberries and the same berries immediately after cooking. The time for eating cooked fruit is in its season. For example, we like apple sauce and baked apples in the winter, but would object to canned apples in June. It may be a hardship to have to eat our strawberries cooked, but it is not nearly so much of a hardship in their season as it is in the winter. The use of freshly stewed fruit in the place of raw fruit in summer would probably greatly reduce the amount of intestinal difficulties. Stewed fruits with rice and milk make a wholesome supper.

Figs and dates.—These may be eaten raw, but should always be carefully washed and then heated enough to destroy any bacteria there may be upon them. The heating immediately following the washing usually improves them by making them puff up and soften a trifle. Stewed figs or dates may be served with boiled rice for dessert.

Vegetables.—The first vegetable to be given is baked potatoes. These may be served with salt alone or with milk or cream and salt. Later boiled or creamed potatoes may be given, but fried potatoes are unwholesome. It is easier to tell what vegetables should be omitted than what ones should be given. The vegetables that are commonly eaten raw—celery, cabbage, and radishes—are unsuitable for young children. Lettuce, if young and fresh, may be a valuable part of the diet of the child that can masticate well. Corn is questionable, because of the difficulty of masticating. Some physicians do not allow carrots, turnips, or parsnips. Considering, however, the value of vegetables as food, it is perhaps more necessary to see that those which are served are fresh and thoroughly cooked and not served with rich sauces or fried than it is to try to avoid any special kinds.

MINERAL NUTRIENTS IN CHILDREN'S DIET.

There is probably no subject connected with dietetics upon which a larger number of unfounded statements have been made than upon the subject of mineral matter in food. For this reason I quote directly from Doctor Mendel's "Childhood and Growth:"

> I have already referred to the peculiar importance of the mineral nutrients for the proper development of the body, in illustration of which the familiar need of lime for the growth of the bones was mentioned. The figures, arranged in the table according to the ratio of lime contained, indicate how unlike is the distribution of mineral ingredients in different common foods.

Analyses of mineral ingredients of various articles of diet.

[Arranged according to the ratio of lime contained.]

	Potassium (K_2O).	Sodium (Na_2O).	Lime (CaO).	Magnesium (MgO).	Iron (Fe_2O_3).	Phosphorus (P_2O_5).	Chlorine (Cl).
Beef	1.66	0.32	0.029	0.152	0.02	1.83	0.28
Wheat	.62	.06	.065	.24	.026	.94	(?)
Potato	2.28	.11	.1	.19	.042	.64	.13
Egg albumin	1.44	1.45	.13	.13	.026	.2	1.32
Peas	1.13	.03	.137	.22	.024	.99	(?)
Human milk	.58	.17	.243	.05	.003	.35	.32
Yolk of egg	.27	.17	.38	.06	.04	1.9	.35
Cow's milk	1.67	1.05	1.51	.2	.003	1.86	1.6

Notice that a child would probably not obtain the lime requisite for the growth of its frame if brought up upon meat and wheat bread alone. Professor Bunge has lately called attention to the possible danger to children in the increased consumption of candy prepared, as it is, from pure sugar. He explains the popular notion regarding a connection between defective teeth and candy eating on the assumption that children who live largely on meat, bread, and candy—all poor in lime—may fail to get their proper quota of this element. He urges a return to lime-containing sweet fruits for the dietary of children. This seems to me more rational, at least, than the indiscriminate administration of limewater. The quantities of lime in common foods are given in the table following:

Quantities of lime in foods.

[Milligrams per 100 grams of the dry substance.]

Sugar	0.0	Egg white	130.0
Honey	6.7	Peas	137.0
Beef	29.0	Plums	166.0
Wheat bread	46.0	Human milk	243.0
Grapes (Malaga)	60.0	Egg yolk	380.0
Graham bread	77.0	Figs	400.0
Pears	95.0	Strawberries	483.0
Potatoes	100.0	Cow's milk	1,510.0
Dates	108.0		

WHOLE WHEAT BREAD.

The amounts of lime given in the above table, 46 milligrams for white bread and 77 milligrams for Graham, are for each 100 grams of dry substance. Our own dietary, given on page 30, has about 65 per cent of this amount of bread. This bread would, therefore, contain about 30 milligrams of lime if it were white and about 50 if it were Graham. The substitution of Graham bread for white in the dietary would increase the lime by only 20 milligrams. According to American Food Materials, the total mineral matter in white bread is 1.1 per cent, that in Graham is 1.5 per cent. The substitution of Graham bread for white, therefore, in the dietary would raise the total mineral matter 0.4 of a gram, or 400 milligrams. This would bring the mineral matter in the bread up to 1.5 grams and raise the total in the dietary to 10.1 grams.

So far as the total amount of mineral matter is concerned, this increase could have been secured by 2 ounces, or about one-fifth of a cup, of milk. So far as the increase in lime alone is concerned, the addition of a tablespoonful of milk would be as effective as the substitution of Graham bread for white bread in the dietary. There seems then to be no reason to urge Graham or whole wheat bread, either on the score of the total amount of mineral matter or on the score of the amount of lime. On the other hand, in the present state of our knowledge we are not prepared to say that this bread may not have advantages over white bread. It certainly has if the child prefers the taste of it or if variety is an object. What is said here refers only to mineral matter, not to the advantage which coarse bread has over fine bread in containing large amounts of cellulose and in giving needed bulk to the food. Even this advantage is sometimes overestimated when fruits and vegetables are available for the same purpose.

EATING BETWEEN MEALS.

The time when the child begins to take three regular meals a day like his elders is the time when the question of eating between meals arises. It may be said that at the beginning of this period the child should be given a certain amount of nourishing food in the middle of the morning and the middle of the afternoon; later, he should not be given food at these times, but should be permitted to take it, if it is of the right kind. *At no time should the food between meals be of a character to tempt the child to eat unless he is really hungry.* A cup of milk and some zwieback or hard crackers will do for a very young child. The zwieback alone should suffice for an older child.

This matter of eating between meals is one in which very much could be accomplished by cooperation among mothers. One mother who allows her child to buy candy to eat between meals may make it exceedingly difficult for other mothers to adhere to their rules. One child treats another, and himself must in turn be treated.

We talk very much and perhaps fancifully of the "larger home-making" and "municipal housekeeping." There is danger perhaps of using the terms without grasping their real significance and importance. There are certainly, however, many problems which vitally affect the welfare of children, which cannot be settled by individual women in their separate homes. They call for the cooperation of all the women of a community. The women of a town could, if they got together, control just as absolutely the food that is sold to the children of the town as they control that which is given to their own children within their own walls. It would probably be an unpleasant revelation to most women to follow the push carts from which school children are fed at recess, and to trace to their source the candy and other foods which they carry.

It would seem as if the first duty of the "larger home-making" was in connection with the feeding of children. As a result of her experience on the Board of Education in Chicago Miss Addam advises the Woman's Club of that city to make this work their chie interest for the near future.

THE CHARACTER OF THE VARIOUS MEALS.

With a general idea of the amount of food required daily there nee be no special effort to balance each meal. In general the simplest foods should be given at night. Bread, milk, and simple sweets like stewed fruits or plain cake, make a good supper for little children. The most important parts of the breakfast are milk, cereal or toast, and fruit. The question arises with school children whether the heavy meal ought to be at noon or night. At noon the meal may interfere with the afternoon work, at night with sleep. It should be remembered that the heavy meal usually means the one which includes meat. The nourishment obtained by the grown person from meat is secured by the child from milk. This may be so distributed through the different meals that there need be no especially large meal. The lunch taken by older people with the addition of milk can be considered the dinner of the child. His supper can then precede the regular dinner of the family and be very simple though nutritious. For school children a warm liquid is desirable at noon. This may be soup or cocoa. Chocolate is too rich. The fact that fats remain longer in the stomach than other substances makes it particularly undesirable to serve fatty foods at noon if the child is to return soon to work.

THE LUNCH BOX.

The use of paper napkins and paraffin paper has revolutionized the possibilities of daintiness and attractiveness in the school lunch. Napkins are likely to become soiled the first day, and if they are linen they must either be replaced, which adds materially to the family wash, or must remain in unattractive form. Paper napkins, if uncolored, are safe to use and need not be unbeautiful. Paraffin paper makes it possible to keep one food from adhering to another and to keep sandwiches, cake, and similar foods moist. Plain white paper napkins may be bought for 35 cents a hundred. Paraffin paper is sold at the rate of 24 large sheets for 5 cents.

When there is a chance to wash dishes in the school, it is not impracticable for each pupil to have his own knife, fork, spoon, plate, and cup. Enamel ware plates and cups are suitable for this purpose because light. Lunch boxes modeled after the expensive tea baskets used by automobilists can be made at little expense out of small wicker telescope bags. Supports for the utensils can be made by fastening narrow leather straps to the sides of the basket. The telescope is mentioned because the price is low, but a basket with a hinged cover is more convenient.

THE CONTENTS OF THE LUNCH BOX.

In preparing a lunch-box lunch the same scheme may be followed as in the planning of the entire diet. As the mother looks ahead from day to day she can plan to have on hand always, besides the bread and butter, a protein-rich food, a fruit or vegetable, and a sweet. If milk or stew is provided at the school this supplies the protein-rich food and also the needed liquid. Let us suppose a potato soup is served at the school. If made with undiluted milk and served in sufficient quantity, it may be considered as satisfying the protein requirement. A lettuce sandwich and a fig, date, or prune sandwich, an apple, and a piece of cake, or rather that article dear to the heart of childhood, a small frosted cake, would make a dainty and reasonably well balanced meal.

A cup of cottage cheese, a slice of potted meat, meat or fish sandwiches, the yolks of eggs seasoned and spread between slices of bread and butter, or a cup custard, are possible ways of serving protein-rich foods.

Raw figs, dates, or prunes, baked apples, apple sauce, stewed dried fruits, or fresh fruits satisfy the demand for cellulose-rich foods.

The sweets may be in the form of plain cake, cookies, sweet sandwiches, sweet chocolate, or pure candy.

We would remind those who think that this meal is oversweet that it is better to have it oversweet than overfat. Sugar is rapidly absorbed while fat is the last substance to leave the stomach. Butter and mayonnaise dressing are the best forms in which to put fat into the lunch-box lunch. The latter, however, is an expensive food, and the butter is as digestible and wholesome. It is not so important to try to introduce wholesome fats into this meal as to exclude unwholesome ones. Fried foods should never be a part of the school lunch.[a]

TABLE HABITS.

On the subject of table habits probably nothing better has been said than the following from Doctor Mendel and Doctor Oppenheim:

> We frequently hear the remark that childhood is the period at which correct habits should be formed. The subject is one which perhaps more properly belongs to the psychology of youth; but the foundation of proper habits of rest, exercise, and diet should be based upon sound physiological grounds. Life is in a sense a rhythm of inherited or acquired habits. With respect to one of these I can not refrain from quoting Dr. Nathan Oppenheim. He says:
>
> "From the earliest possible time the habit of eating slowly and chewing the food very thoroughly must be insisted upon. If this is begun at an early enough age, it is easily learned and will prove to be a valuable acquisition for later years. If the child eats with an attendant or with the rest of the family, he should be allowed to

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[a] See "School Luncheons, What and How to Prepare for them," by Mrs. Frederic Schoff, in the National Congress of Mothers Magazine, November, 1908.

talk to a reasonable extent; speech should be regulated, not forbidden. For with children, as well as adults, the act of speaking causes useful breaks in the steady course of masticating and swallowing food; it allows the gastric contents to be well mixed with the secretions of the stomach, and at the same time it provides an atmosphere of reasonable enjoyment that a child may claim as well as his elders. The rule that children should be seen and not heard is capable of too strict an interpretation that lends itself very readily to petty domestic tyranny. So long as there is a reasonable and healthy discipline in the household, every child should be allowed to talk, to take part in the family life, to feel that he is an integral part of the home circle, and to realize that his words—even if they be not heavy with wisdom—will receive the consideration and attention which abiding love and a mild toleration dictate. The ordinary child whose environment provides suitable examples of self-restraint and good manners learns in a surprisingly short time how to conduct himself within sufficient bounds to be reckoned as a human being, and not as a more or less untamed animal."[a]

I have dwelt upon the subject of table habits because physiologists are just beginning to understand the real significance of the pleasure of the table in the functions of digestion, as well as in the broader enjoyment of life. The psychical element in digestion can not be overrated. Fear, sorrow, anguish, nausea, may promptly check the flow of the digestive juices; while palate-tempting dishes and the pleasure of the meal, with a congenial environment, are mighty incentives to the production of active digestive secretions. A scolding mother and a sensitive child make an unhealthy dining-room combination.

THE COST OF THE FOOD MATERIALS.

The cost of the various food materials in the amounts given in Table II and at common prices would be as follows:

Material.	Amount.	Price.	Cost.
	Ounces.		
Milk	18½	6 cents a quart	$0.032
Cream	1½	25 cents a quart	.010
Fish	3	15 cents a pound	.028
Bread	3½	5 cents a pound	.013
Eggs	2	30 cents a dozen	.025
Rice pudding	4		.010
Rolled oats	½	6 cents a pound	.002
Cookies	½	13	.004
Potato	2	80 cents a bushel	.002
Prunes	1¼	15 cents a pound	.012
Celery	2		.020
Sugar	¼	5 cents a pound	.001
Orange	4	30 cents a dozen	.025
Butter	1¼	30 cents a pound	.023
Total			.207

This bill of fare included costly foods. If the cream, orange, and celery were omitted, and 3 ounces of round steak substituted for the fish and egg, and the bread and prune sauce increased enough to preserve the fuel value, the cost could be reduced to 13 cents. This would be at the rate of 26 cents for a grown person if the same foods were used. In this case, however, beef would probably be taken instead of milk, which would bring down the cost a trifle—to 23 cents, let us say. A menu of round steak and potatoes, bread and butter, oatmeal, rice pudding, prunes, and cookies, with an allowance of two glasses of milk a day for a child, does not sound extravagant. Its cost, however, must be compared with wages before it can be fully understood.

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[a] "The Care of the Child in Health," by Nathan Oppenheim. Macmillan Company, N. Y., 1900.

THE COST OF FOOD COMPARED WITH WAGES.

According to the above estimate, in which the prices are not by any means those of large cities at present, the cost of simple nourishing food for a family of two grown people and three children 5, 7, and 9 years of age, would be 85 cents a day, or $310.25 a year. A man at work for $1.50 a day every working day in the year earns $450. This man with a family of the size given would be obliged to spend 69 per cent of his income for food, and would get none of the commonest luxuries. In this computation the family is small and the income uninterrupted.

This comparison of the price of food with wages, taken in connection with the fact that irregularity in employment is the rule rather than the exception, may indicate why so large a per cent of the children in our schools appear undernourished, and may also be a reason why schools are being forced to take up work which at first thought seems out of their province.

IV. THE UNDERFED CHILD.

Robert Hunter's "Poverty," published in 1904, contained the following statement: "There must be thousands, very likely 60,000 to 70,000 children, in New York City alone who often arrive at school hungry and unfitted to do the work required." This cautious statement of Mr. Hunter was so garbled by sensational newspapers that the report was soon in circulation that Robert Hunter had said that there were 60,000 to 70,000 starving children in the city of New York. The result was an hysterical excitement and an investigation which showed that the statement in its garbled form could not be substantiated. There followed a somewhat indiscriminate denunciation of settlement workers and others interested in social reform, which doubtless greatly impeded the work of meeting a situation which was sufficiently serious without exaggeration. The interest aroused, however, led to a fuller realization of the extent of underfeeding among school children and to a more careful study of relief measures, not only in New York, but in the other large cities of the country.

THE CHICAGO INVESTIGATION.

Probably the most thorough and valuable investigation of underfeeding that has been made in this country was that which was carried on in Chicago during the summer and early autumn of 1908 by W. L. Bodine, superintendent of compulsory education, and Dr. D. P. MacMillan, of the department of child study and pedagogic investigation. Their report was made in September, 1908. A careful résumé of it was published in Charities and the Commons for October 17, 1908.

The more exact statistical part of the report was prepared by Doctor MacMillan. This was supplemented by a large mass of facts collected from truant officers, settlement workers, charity workers, relief agents, school principals, teachers, parents, and children.

A preliminary survey of the city showed that most of the necessitous children would be found in 54 schools with an attendance of 59,820.

These were of course schools in the poorest districts. As the time was too short to examine 59,000 children, a special study was made in 12 typical schools with an attendance of 10,000. Neither all of the best-favored schools nor all of the least-favored schools among the 54 were selected, but part of each, the effort being to select 12 schools which were thoroughly representative of conditions in the 54.

All of the 10,000 children were examined and the circumstances of their lives ascertained as far as possible.

Of the 10,000 children, 1,123 were picked out as undoubtedly undernourished. Doctor MacMillan decided that it would be fair to deduct from this number 30 per cent, because some cases were doubtless due to disease or to other causes than actual lack of food. This left 780 children, or 7.8 per cent, whose poor physical condition was attributed to underfeeding. Supposing that the same ratio held good in all the 54 schools of the poor districts, with their 59,820 pupils, Doctor MacMillan estimated that there were 4,666, or about 5,000, really necessitous school children in Chicago.

From the facts gained in this thorough investigation, supplemented by facts obtained from other sources, it was estimated that in addition to the 5,000 really necessitous children, there were at least 10,000 so poorly nourished as to be unable to do their school work well.

One of the most significant parts of the report from the standpoint of the educator is the part previously noted, which relates to the decrease in the per cent of necessitous children in the upper grades.

TABLE III.—*Number of necessitous children in different grades in certain Chicago schools.*

School.	Kindergarten.		Grade I.		Grade II.		Grade III.		Grade IV.		Grade V and above.	
	Total enrollment.	Number necessitous.	Total enrollment.	Number necessitous.	Total enrollment.	Number necessitous.	Total enrollment.	Number necessitous.	Total enrollment.	Number necessitous.	Total enrollment.	Number necessitous.
Goldsmith	......	......	164	29	71	14	70	10	88	9	313	27
Washburne	48	11	358	53	179	20	164	20	129	16	311	31
Smyth	36	4	445	43	193	20	323	23	......	......	......	......
Foster	40	6	457	75	347	43	236	28	132	13	......	......
Dante	50	7	403	41	134	14	418	34	140	9	84	5
Dore	40	6	171	25	247	31	140	14	82	5	238	7
Jones	38	6	234	35	71	8	105	13	31	3	86	2
Jackson	46	5	192	16	217	14	145	11	......	......	......	......
Jenner	30	4	336	55	176	21	151	16	114	14	170	6
Schiller	81	13	334	60	115	14	128	13	125	7	216	7
Walsh	28	5	182	20	159	11	92	7	86	6	......	......
Harrison	14	3	286	50	182	25	57	6	82	9	......	......
Total	451	70	3,562	502	2,091	235	2,029	195	1,009	91	1,418	85

These results may be expressed in per cents:

	Per cent of those in attendance.
In kindergarten	15.9
In first grade	13.8
In second grade	11.2
In third grade	9.6
In fourth grade	9.0
In fifth and above	5.9

From each of the above 30 per cent should be deducted to make it correspond with the final estimate of 5,000 necessitous children. Or, to be more explicit, Doctor MacMillan found 15.9 per cent of the children in the kindergartens, for example, obviously in poor physical condition. He estimated that in about 11 per cent the condition was attributable to underfeeding, while in the remaining 4 or 5 per cent other causes might exist.

THE CONCLUSIONS OF THE CHICAGO REPORT.

The report closes, in substance, with the following:

The investigations show a preference among many sociological and charity workers to have the children fed at home. They also admit that the board of education has no jurisdiction, no legal right, to supply provisions in homes. Several points emphasized by a number who favor the free breakfast plan at schools are as follows:

1. If our charitable organizations can successfully cope with conditions in the home, *why are there so many underfed children in Chicago?*—a fact established beyond a doubt by scientific examinations and admitted by all as true.

2. Is it due to lack of appreciation and adequate public support of some of our local charities, or is it due to false pride, or reluctance on the part of some parents to ask for charity?

3. Could the appetites of school children in an impoverished family, or one accepting relief, always be appeased by limited rations from charitable organizations in the home in instances where a selfish father or adult, either by parental intimidation or force, confiscated more than his or her share of the food and deprived children of their full share? In such instances would not a meal at school for the child be an assurance that the child at least would have one full morning meal?

4. If relief at school would create a spirit of dependency, does not relief at home do the same?

5. Does not the precedent remain in that the cooperative plan at the Oliver Goldsmith School, between the board of education and Johanna Lodge, has long been a success, and no protest has ever been received from parent, pupil, educator, or sociologist?

EXPERIMENT IN THE OLIVER GOLDSMITH SCHOOL.

The experiment in the Oliver Goldsmith School is described in the report as follows:

> On February 19, 1902, an organization of philanthropic women, affiliated with the Sinai Congregation and called the Johanna Lodge, secured authority from the board of education to prepare and furnish simple luncheons to the very needy children of the Goldsmith school at the price of 1 cent per meal. Since that date the feeding of the needy has been carried on, and regarding the success of the work and the extent of its operation I can not do better than quote the following communication, received from Mr. Hornbecker, until last year the principal of the Goldsmith school and under whose inspiration the plan was first inaugurated:
>
> "The Oliver Goldsmith School is situated in the heart of the Russian Jewish district on the West Side.
>
> "The school contains about 1,100 pupils and was opened in September, 1901. * * * The poverty and distress among the pupils was soon noticed by the teachers, who took upon themselves the task of clothing and even feeding many children. Some friendly visitors working in the neighborhood visited the school and I called their attention to the great need of the children. Mrs. Hannah Newman, Mrs. Hannah Moss, and Mrs. E. G. Hirsch, among others, suggested that lunches might be served in the school. Permission was obtained from the board of education to serve a simple luncheon and to charge 1 penny a meal. This did not pay expenses, but the intention was to make the child feel that he was paying for what he received and that he was not an object of charity. The trouble of collection was great, and often the child who was most in need had no penny, so the practice of charging for the meal was abandoned.
>
> "At first many children refused to eat because the food was not prepared by one of their religious faith. This difficulty was obviated by hiring a Jewish woman of the neighborhood to do the work. No attempt was made to serve anything but oatmeal with sugar and milk and bread.
>
> "From February, 1902, to the present time, any child in the Goldsmith school, *who* was hungry, could get all he could eat of this simple fare without cost. We

found that many children had been sitting uncomplainingly all day without a bit of food. Often the mother had nothing to give them for breakfast; went away looking for work, leaving the house locked up. At noon the child had nothing to eat because the mother had not returned.

"No one having seen the joy on the faces of those little ones at the prospect of unlimited food before them can ever forget it.

"The ladies mentioned brought the matter before their organization—the Johanna Lodge—and no difficulty was met in obtaining the necessary funds. An accurate account was kept of all the money expended, but not of the meals served. The expenditures were in 1903–4, $188.17; 1904–5, $216.95; 1905–6, $230; 1906–7, $250.

"From 40 to 70 meals were served each day at an average cost of 2½ cents, not to exceed 3 cents, per meal. The cost of service was the largest item, $3 per week.

"Teachers' reports from time to time showed marked improvement in the general health and school work of the little children, especially those in the kindergarten. We believe that the lives of several children were saved.

"At first, children who did not need the food went to the lunch room out of curiosity. This led to serving the meals just after school called, at 9 and at 1. The teacher then permitted the deserving ones to go to the lunch room.

"I am sure that in the poor districts of Chicago there is no greater educational need than simple lunch rooms, and when they are properly managed there is no danger of pauperizing."

RELIEF MEASURES AT THE DORE SCHOOL.

Mr. F. J. Watson, principal of the Dore School, reports the system successfully in operation at that school. He says:

> You ask me for an account of the free luncheon given to indigent and subnormal pupils at the Dore School. These luncheons have been served every day since the beginning of the month of May. The food is furnished by the Children's Relief and Aid Society through the Crane day nursery. A pupil goes after it at 11.30 and carries back the dishes at the close of the afternoon session. The luncheon consists generally of either sandwiches and cocoa, meat stew and bread, soup and bread, or rice and bread. We have a gas plate in an adjoining room, but have not as yet found it necessary to use it, as the soup and cocoa are sent over hot. Spoons, bowls, and cups have been donated by some kind friends of the school.

A temporary solution of the problem has been reached in Chicago by the appointment of a corps of school nurses who report cases to municipal authorities.

FREE BREAKFASTS IN BIRMINGHAM, ENGLAND.

To the description of the foregoing plans, which as schemes for relief are excellent, may be added some of the details of the experiment in Birmingham, where the cost of handling the food is reduced to a minimum. Each meal consists of a cup of cocoa and 5 ounces of bread cut into two slices, one being spread with butter, the other with jam. The cocoa is made of cocoa essence, sterilized skimmed milk, and sugar. The bread is what is known in the trade as "seconds," and though cheaper than white bread is thought by many to be even better. It is sent to the schools directly from the flour mills. The cocoa is made at the depot of the milk merchant, who at the time of the last sterilization of the milk adds the cocoa and sugar with which he has been provided. The milk merchant makes no charge for the extra work. A boy from each school is hired to deliver the cocoa to the schools.

THE PROVISION OF MEALS ACT OF THE BRITISH PARLIAMENT.

In Chicago the use of any part of the school funds for the purpose of feeding indigent children has been declared illegal. A similar situation in England was met in December 21, 1906, by an act of Parliament permitting local school authorities to use funds for this purpose.

The select committee to which the proposed law was referred made a report which was ordered printed by the House of Commons on July 27, 1906. The introduction to the report says that the committee was influenced by the evidence collected by the royal commission on physical training (Scotland), by the interdepartmental committee on physical deterioration, and by the interdepartmental committee on medical inspection and feeding of children attending public elementary schools, as well as by the results of its own investigations.

The law, which is known as the education (provision of meals) act, 1906, provides as follows:

1. A local education authority under Part III of the education act, 1902, may take such steps as they think fit for the provision of meals for children in attendance at any public elementary school in their area, and for that purpose:

(*a*) May associate with themselves any committee on which the authority are represented, who will undertake to provide food for those children (in this act called a "school canteen committee"); and

(*b*) may aid that committee by furnishing such land, buildings, furniture, and apparatus, and such officers and servants as may be necessary for the organization, preparation, and service of such meals;

but, save as hereinafter provided, the authority shall not incur any expense in respect of the purchase of food to be supplied at such meals.

2. (1) There shall be charged to the parent of every child in respect of every meal furnished to that child under this act such an amount as may be determined by the local education authority, and, in the event of payment not being made by the parent, it shall be the duty of the authority, unless they are satisfied that the parent is unable by reason of circumstances other than his own default to pay the amount, to require the payment of that amount from that parent, and any such amount may be recovered summarily as a civil debt.

(2) The local education authority shall pay over to the school canteen committee so much of any money paid to them by, or recovered from, any parent as may be determined by the authority to represent the cost of the food furnished by the committee to the child of that parent, less a reasonable deduction in respect of the expenses of recovering the same.

3. Where the local education authority resolve that any of the children attending an elementary school within their area are unable by reason of lack of food to take full

advantage of the education provided for them, and have ascertained that funds other than public funds are not available or are insufficient in amount to defray the cost of food furnished in meals under this act, they may apply to the board of education, and that board may authorize them to spend out of the rates such sum as will meet the cost of the provision of such food, provided that the total amount expended by a local education authority for the purposes of this section in any local financial year shall not exceed the amount which would be produced by a rate of 1 half-penny in the pound over the area of the authority, or, where the authority is a county council (other than the London County Council), over the area of the parish or parishes which in the opinion of the council are served by the school.

4. The provision of any meal under this act to a child and the failure on the part of the parent to pay any amount demanded under this act in respect of a meal shall not deprive the parent of any franchise, right, or privilege, or subject him to any disability.[a] * * *

Up to the time of the passage of this act there had been provision for the feeding of necessitous children in most of the cities of England, and the number of free meals given in that country was greatly in excess of those given in America. The responsibility, however, had rested upon voluntary organizations, and school authorities were not permitted to use their funds for the purpose.[b] Now while the assistance of charitable organizations is still to be sought, an opening wedge has been inserted, and it is no longer impossible to draw on school funds for the purchase of food.

Since the passage of the act many cities have made appropriations. Birmingham almost at once made an annual appropriation of £2,000. London was slow to act, but the following from The Lancet of January 2, 1909, shows that it has finally taken definite steps toward making an appropriation:

> On December 16, 1908, the London education committee agreed to accept a report from the general purposes subcommittee recommending that power should be sought from the London County Council to draw £10,000 from the county fund for the purpose of feeding underfed children in the elementary schools. This practically means that in future the rate payers will have to provide money for the purpose of feeding those unfortunate children whose parents are either too poor or too lazy to feed them themselves.

While the writer of this article questions the complete success of the education (provision of meals) act, he adds:

> But we quite agree that if the State is to educate children, and apparently it must do so, that it is mere waste of money to try to educate a child who is practically starving. The problem is a serious one, and it would be well for those politicians who have hailed the decision as a party victory to take a lesson from the Paris municipal council as to how that body manages to run its *cantines scolaires* in the excellent way in which they are run, and more important still as to its system of inspection as to what parents can pay and as to what parents can really not pay.

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[a] Full texts of the bill cited above may be obtained from Eyre and Spottiswoode, London, or any of the following: Wyman & Sons (Limited), Fetter Lane, E. C., London; Oliver & Boyd, Edinburgh; E. Ponsonby, 116 Grafton street, Dublin. Price, ½d.

[b] Further information may be obtained about the campaign which led up to the passage of the bill from Sir John Gorst's "Children of the Nation, How their Health and Vigor should be Promoted by the State," E. P. Dutton & Co., New York. 1907.

SCHOOL CANTEENS IN PARIS.

It seems to be universally conceded that Paris has the best system for feeding the school children that has been worked out by any municipality. This has been so fully described in "The Bitter Cry of the Children," by John Spargo,[a] that it is unnecessary to go into details, except to say that since the plan has been in operation for nearly thirty years Paris has much that is of value to teach other cities. The Paris *cantines scolaires* excel all other school kitchens apparently in the quality of the food sold for a given price, in the system which has been worked out for preventing the unworthy from imposing upon the municipality and securing free meals, and in the very humane plan by which the feelings of the children receiving free meals are spared. On these points Mr. Spargo says:

> The cost of a meal consisting of a bowl of good soup, a plate of meat, two kinds of vegetables, and bread ad libitum is 15 centimes (3 cents).
>
> Small tickets for the meals are issued, each child going through a little box office which only permits of one being in at a time. If a little boy or girl claims to be too poor to pay for a meal ticket, no questions are asked, the ticket is issued, the child's name and address noted. By next day, or at most in two days, inquiries have been made. If it is found that the parents can afford it, they are compelled to pay the full price and to refund whatever sum may be due to the canteen for the meals their child has had. If they are found to be really too poor to pay, tickets are issued to the child for as long as it may be necessary. In such cases the account is not charged against the parents.

About $200,000 a year is appropriated annually by the municipal council to defray the expense of the meals of those children who can not pay for them.

Since canteens are now attached to all of the public schools of Paris, to those in the districts where the well to do live as well as those among the poor, they may be said to be maintained as a matter of educational policy rather than as a relief measure. For this reason they are of more interest to educators than the examples which follow of schools where food is furnished chiefly to the needy.

SCHOOL MEALS IN OTHER EUROPEAN COUNTRIES.

GERMANY.

Meals are served to school children in most of the large cities of Germany. The money is raised chiefly by private charitable enterprise, but this is supplemented by municipal funds. The work in Germany may be considered as relief except in the school for feeble-minded children in Leipzig, where a midday meal is provided for all the children in attendance. Milk and rolls are given in other schools in Leipzig to children who are especially fragile and delicate. These are selected by a medical officer.

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[a] "The Bitter Cry of the Children," by John Spargo. New York, The MacMillan Company. 1906.

AUSTRIA.

In Austrian cities (Vienna, Trieste, Prague) poor children are fed partly by private charitable associations and partly by the use of municipal funds. The municipality furnishes rooms usually in the school buildings.

BELGIUM.

In Liege the municipality has furnished soup free for many years to all children in the kindergartens. The benefits of this practice have recently been extended to the children of the first year's course, and to needy children in the second and third year's courses.

In Antwerp food is served to all who wish to buy. There is a charge of 5 centimes a day in the kindergarten and 10 centimes in the elementary schools.

In Brussels meals are served free to indigent children.

DENMARK.

In Copenhagen meals are provided free for all children who wish them. No questions are raised as to the economic condition of the parents. One-third of the children in the free schools were reported in 1905 as taking advantage of this opportunity. The work is administered by an association directly connected with the municipality and recovering from it a yearly grant to supplement the private contributions.

HOLLAND.

Utrecht has since 1904 provided free dinners during the winter months for children designated by the head of the school and approved by the proper officials. In other cities of Holland the relief is entirely in the hands of charitable organizations, in most cases without aid from municipal funds.

NORWAY AND SWEDEN.

Free meals are provided necessitous school children by the local authorities. In Stockholm kitchens are constructed in connection with the school buildings in all parishes. In Christiania provision is made for the purchase of tickets by parents who are able to pay about 2½ cents per meal, and in some parishes of Stockholm those who are able to pay are charged about 1 cent for a meal consisting as a rule of two dishes. In some parishes the poorest are served a breakfast of milk and bread. In the elementary schools of Stockholm the food is prepared by the pupils in the cooking sections of the schools.

SPAIN.

In Madrid an association has recently been organized for maintaining "school canteens." This is under supervision of the public authorities and receives assistance from the ministry of education, the provincial administration, and the municipality. It supplies food to those qualified for relief, while children who can afford it pay from 2½ to 3½ cents per week toward the canteen expenses.

Barcelona supplies, through religious charitable associations, breakfast and lunch to children who furnish certificates of poverty.

SWITZERLAND.

In Zurich the provision of meals is in the hands of the school authority of each district, assisted in some districts by charitable organizations. Meals are given to all underfed children. Well to do parents pay 3 cents a meal.

ITALY.

In Italy the care of underfed children is as a rule in the hands of private institutions receiving assistance from state, provincial, and municipal funds. An exception is Milan, where a central organization connected directly with and administered by the municipality provides a breakfast for school children, free for the poorer children, and at a small cost to those who can afford to pay. These breakfasts are served to the five elementary classes only.

Another exception is Vercelli, where all school children are fed at the municipal expense. Here the rations are carefully planned, one of the first two classes, for example, receiving 120 grams of bread with 20 grams of cheese or meat.

RELATION BETWEEN THE PROBLEM OF THE UNDERFED AND THE PROBLEM OF FEEDING SCHOOL CHILDREN.

From this examination of conditions and suggested remedies it seems obvious that there are two problems before us, alike in many respects but differing in others. One of these, the problem of the underfed child, is a problem chiefly of poverty; the other, that of the feeding of school children, is a problem chiefly of education. When the points of resemblance only are noted and the points of difference overlooked, there is always a tendency to think of the temporary solution of the problem of the underfed child as the permanent solution of the problem of feeding school children. Those who best understand the conditions which underlie both problems are least likely to fall into this error. At a time of great popular excitement in New York City over the reports of suffering among the school children Lillian Wald, the head of the Nurses' Settlement, who by training and by experience is fitted to understand the physical as well as the mental needs of children and also to know the difficulty with which these needs are met among the poor, made the following clear summary of the situation:

Nothing in the circumstances of the school child within the last couple of weeks has warranted hasty action. The general condition has existed in this city for many years, though with increased hardships during this season. Experiments of former years and of this winter have proved the futility and mistake of meeting the needs of the underfed—or improperly fed—school child by free lunch rooms or kitchens on the basis of charity. The need of the school lunch has been again recognized; it is not a revolutionary measure—in reality not a departure from the principle of the obligation assumed by educational authorities toward the child, but rather an evolution of the measures adopted for child nurture to the end of securing the highest efficiency of the responsible adult citizen. Estimated by the most material measurement, it is a comparatively small investment of public thought and public money for a large result. It has been tried and accepted in some schools and for the specially favored. It would be democratic and of wide social value if the successful experiment for the few were made general and for the many.[a]

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[a] "The Feeding of School Children," by Lillian D. Wald; in Charities and the Commons, June 13, 1908.

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